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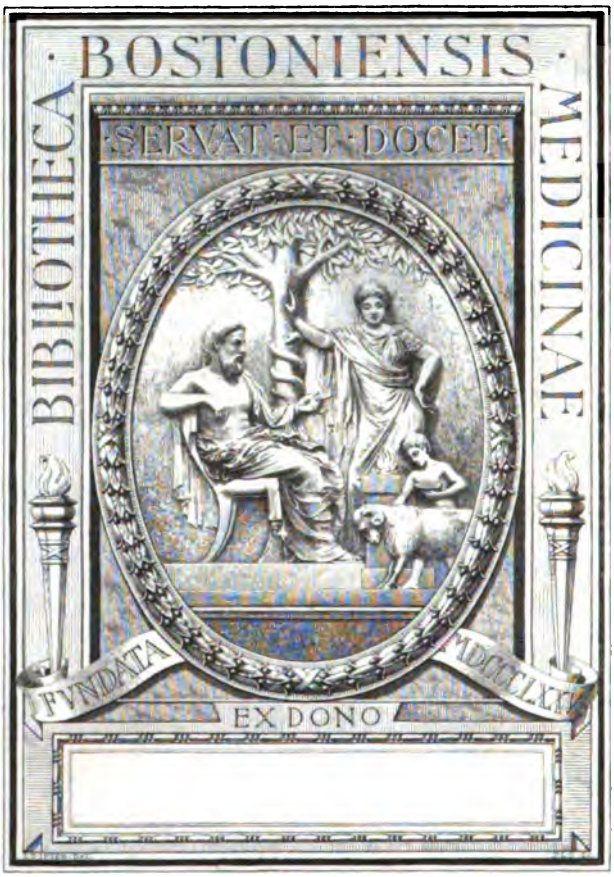
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J. J. LAWRENCE, A. M., M. D.
Editor and Proprietor

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J. J. LAWRENCE, A. M., M. D.,
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Editorial.

Bossism.

This seems to be the age of Bossism. The working man is bossed by the Union Labor system with its walking delegates. He is told how many hours to work and what wages to demand, taking away from him all the personal liberty which was guaranteed him by the Constitution and founders of this Government. They are now trying to boss the medical profession, telling the doctor what he must do and what he must not do, but they are finding this a rather hard job, for the reason that the average physician is an intelligent man, knows his rights and dares to maintain them. Of course, the more ignorant a man is, the more easily he is bossed. Nowadays somebody is always trying to pass a law to make others do as he wants them to, forgetting that this is a government of individual liberty, and that every man has an equal right to an opinion of his own. Bossism can only exist permanently in a monarchy, and not in a republic.

Bosh.

All this sensational talk by politicians and newspapers of the evils done by trusts is bosh. It is an undeniable truth that trusts have greatly benefited this country, and are today one of the prime causes of our wonderful national prosperity. Large industrial corporations can accomplish results impossible to the small manufacturer, because the cost of production is lowered when articles are manufactured in large quantities. Larger profits enable the corporations to pay higher wages, and this is of advantage to the community because it puts more

money into circulation. Consolidation of firms in the same line of business provides the necessary capital for conducting experiments that lead to new inventions and improvements of all kinds that add to the comfort and pleasure of life. So many everyday conveniences and luxuries are the result of enterprise that required the expenditure of large sums of money before it was finally successful. Wages in this country, home of the trusts, are higher than in any other country, and are also higher than ever before in the history of the world. Will the people allow the influence of scheming politicians and the "yellow" press to inflame them against conditions that are distinctly favorable? We say what we believe on this subject, in spite of the fact that the Editor of the BRIEF does not own a dollar's worth of stock in any trust, consolidation or syndicate.

Can Not Be Done.

Some of the large chemical houses pretend that they can analyze anything and make anything that anybody else makes. Of course, it's a lie, pure and simple—they simply want to substitute their own preparation and get the benefit of the good name of the other man's specialty. There are ninety per cent of the organic preparations that can not possibly be analyzed, because there are no tests laid down for them. It is common sense to suppose that a man who makes a special kind of cake can make it better than a man who only makes a cake once in awhile. The man who manufactures a special axe can make a better one than the man who manufactures every variety of tools and mechanical implements. This is the common-sense view of the thing, and the fight on specialties is as senseless as anything well can be.

The Cause of Wrecks.

The fight by the Government and politicians against railroads is the reason we are having so many more wrecks nowadays than we used to have. The large majority of the stock of railroads is owned by poor people and people of the middle classes. Of course the railroads like to be able to make a good showing on earnings and dividends, so they economize to such an extent on the wages paid employes that the natural result is incompetent and inefficient service. The shrewd financiers saw that this fight by the Government and politicians would hurt the railroads, and for that reason they put their stock on the market. It was bought by people who wanted to get a good return on their money, but did not foresee the effects of this fight by the politicians. The fight on particular lines of business is un-American. This Government is founded on the idea that the individual is everything, and the government nothing more than a protection against crime, but we are fast losing our idea of the liberty of the individual.

Between the Devil and the Deep Blue Sea.

The tendency of the Republican party seems to be to monarchy, and the tendency of the Democratic party to socialism. Between the two, the average conservative citizen is between the devil and the deep blue sea.

WE have been asked the question whether the chemists of this country are as good as those of Europe. It is a well known fact that the chemists of America and England are the best in the world.

Pulmonary Tuberculosis.

A Pennsylvania subscriber writes us as follows: "I have a son afflicted with pulmonary tuberculosis, having reached the hemorrhagic stage, who is about to leave for Colorado Springs. I seek this opportunity to ask if you will request the readers of the BRIEF to give their opinions regarding the relative value of the climate of Colorado Springs as compared with that of Arizona, New Mexico and California for combating this disease."

We feel sure that a discussion of this kind will also be appreciated by many other readers, and so let us have your views on this subject.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
NINTH AND OLIVE STREETS,
ST. LOUIS, MO.

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[Written for the MEDICAL BRIEF.]

The Treatment of Hemorrhage by the Use of Drugs.

BY WALTER E. DIXON, M. A. (CANTAB.) M. D. (LONDON.)

Professor of Materia Medica, Pharmacology and Therapeutics in Kings's College, London; Assistant to the Downing Professor of Medicine in the University of Cambridge. London, England.

So much misconception exists respecting the pharmacological action of the drugs commonly employed for the arrest of hemorrhage that I have thought it desirable to give some account of their modes of action, especially with respect to their relative effects on different vessels.

They may be conveniently divided into two categories (1) those which act topically by constricting the blood vessels, and (2) those which are absorbed and pass into the circulation before reaching the seat of hemorrhage.

When it is possible to apply a drug directly to a bleeding point the hemorrhage may, as a rule, be stopped with certainty by bodies which either coagulate proteid or constrict the bleeding vessels. The tannins and ferric chloride may be taken as examples of this group, and they act by blocking up the smaller vessels with the precipitated serum-proteids. This principle of treatment is correct, and such drugs may be employed beneficially in hemorrhage from the stomach, the nose, the uterus, or other parts where the drug actually comes in contact with the bleeding point. As examples of the second group adrenalin, cocaine and digitalis may be mentioned. When the drug is absorbed and passes into the blood before reaching the seat of hemorrhage, exactly what happens to the bleeding vessel is not easy to determine. First it is necessary to know what has become of the drug; has it, for example, undergone any change in the body which renders its action inert? Secondly, supposing the drug to have reached the blood, and to have retained its activity as a vaso-constrictor, it must exert its action on the vessels of the bleeding point, but not more on these vessels than on the other vessels of the body; and supposing the bleeding vessels in question are poorly innervated or poorly supplied with muscle, the effect on the other vessels may entirely overshadow the effect on the bleeding vessels, so that the large increase in blood pressure from the former effect may overcome the constriction of the more feebly innervated vessels.

The tannins, as is now well known from the work of Stockman and others, are not absorbed as such into the system; not more than about one per cent reaches the blood in the form of gallate of sodium. Gallate of sodium does not constrict vessels; indeed, any tendency it

has on their caliber is always on the side of dilation, nor does it increase the tendency of the blood to clot, so that the tannins can not be regarded as drugs of value in the treatment of internal bleeding. The active principle of the suprarenal glands has been described as exerting a decided action in checking internal hemorrhage, even when administered by the mouth. We know that adrenalin is destroyed in the stomach, and that none of the active constituent reaches the blood; at least, there is no evidence of its absorption, as shown by vaso-constriction or rise in blood pressure. I have verified these statements both in animals and on man; in the latter sixty minims of one in one thousand adrenalin well diluted, produced no effect on the blood pressure, as recorded by the Hill and Barnard instrument, whilst in animals even larger doses have been given by the mouth without producing vascular changes. But if even a quarter of a minim of a solution of this strength is injected into the circulation of a cat, or if two minims are injected into the circulation of a man, there is a decided rise in blood pressure, acceleration of the pulse, and the other signs of suprarenal action. Even when adrenalin is injected subcutaneously it produces no effect on the systemic blood vessels. I have tried this by injecting under the skin of the forearm ten minims of a 0.1 per cent solution, and simultaneously observing the blood pressure on the opposite arm. The pressure remained constant. Similar effects have been observed by Janeway in America, and Elliot in Cambridge. The adrenalin produces a local effect, and is apparently destroyed locally. So that neither tannin nor adrenalin, when administered in the manner described, can reach the blood in a form in which it is possible for them to influence the vaso-motor system.

There are several drugs which induce vaso-constriction of internal vessels. Adrenalin, administered intravenously, will do this, and ergot, the digitalis group of drugs, lead and other substances are effective when administered, either by the mouth or subcutaneously. This vaso-constriction does not affect all the vessels in equal degree; some may be intensely constricted, whilst others, from an absence of nerve supply or poor development of the muscle in their walls, may remain almost or entirely unaffected.

In considering the condition of the blood vessels in any organ of the body, two factors must be noticed: (1) the general blood pressure, and (2) the tendency to constriction produced by the local action of the drug on the organ. The latter effect can only be obtained by perfusion of the isolated organ with defibrinated blood outside the body, for it is only in this way that the general effect of the drug on the other vessels, resulting in their constriction, and so of a general rise of blood pressure, can be avoided. Such experiments invariably show us that the vessels of the splanchnic area become constricted much more intensely than those of the muscles brain or lungs.

If one may take a hypothetical case in which a drug is producing constriction of the vessels by acting on their plain muscle fibre, it will produce intense constriction of the splanchnic vessels, a somewhat smaller constriction of the vessels supplying the skeletal muscles, and a still smaller constriction of the lungs, liver and brain. This effect in the lungs, brain or liver is so feeble that the tendency to constriction is overcome by the rise in blood pressure from the more intense splanchnic constriction, so that instead of constricting, these vessels dilate, and the organ becomes congested. This statement is true for all the drugs in common use which are employed to produce vaso-constriction. The vessels of the intestines and splanchnic area constrict most, then follow the skeletal muscles, kidney, spleen, uterus, etc., and lastly, the liver, lungs, brain and coronary vessels. The lungs and coronary vessels receive no nerve supply to their muscles, whilst that to the cerebral vessels and liver is of the most meager description, if, indeed, it exists at all.

We are now in a position to examine in further detail the effect of those drugs which produce vaso-constriction. Adrenalin is the first, and this drug, as already shown, induces a specific action only when it is injected into the circulation. It has been shown that adrenalin acts upon the sympathetic nerve-endings in the muscles, and, therefore, it induces vaso-constriction just in proportion to

the development of these endings. Thus the constriction of the vessels of the splanchnic area is intense; it is less in those of the limbs, very feeble in the cerebral vessels, and absent in the coronary. Hence, supposing a dose of adrenalin is administered intravenously to a man, the blood pressure rises mainly as the result of the constriction of the splanchnic vessels, and the blood being squeezed out from these vessels collects in certain organs, the vessels of which do not respond to adrenalin—*i. e.*, which are not innervated—especially the lungs, and to a less extent the liver and the brain. Not only are the vessels of the lungs and the brain not constricted, but they are in a state of considerable congestion.

Adrenalin has a decided action on the heart by acting on the sympathetic endings; it beats much more quickly and vigorously, and I have often, by continued administrations of small intravenous injections, kept an animal poisoned by toxins alive which, when these injections are stopped, dies immediately from cardiac failure. I mention this fact to draw attention to the powerful cardiac action of adrenalin, which might be invaluable in tiding over an emergency, and which has not yet received proper therapeutic recognition.

The use of ergot in the treatment of hemorrhage is also much misunderstood. It produces constriction of the vessels through its action upon certain nerve centers. It does not, like adrenalin, act on peripheral nerve endings; this has been shown by many observers, and I have verified their statements by perfusing the drug through peripheral vessels which, in all cases, tend rather to dilate than to constrict. Ergot, acting through the nervous system, produces effects somewhat similar to those produced by intravenous injections of adrenalin. Whilst it gives rise to intense constriction of the splanchnic and limb vessels, it induces congestion of the liver, lungs and meninges. There is another fact about ergot which has not received adequate attention. I refer to its action on the heart. Under the influence of this drug the vigor of the heart increases, and its output is augmented. This action is on the cardiac muscle, since the effect can be produced on the isolated heart. It is quite a different effect from that of digitalis, since there is no slowing of the beat, and no action on the vagal mechanism. The effect is considerable, more pronounced than that of digitalis, and thoroughly deserves the attention of clinicians. The objection to the use of ergot in any form is its want of uniformity; much on the market is quite inactive, and much has so feeble an effect as to be useless in the treatment of disease. Until it is suitably standardized these objections must continue to hold.

The great difference between the action of adrenalin and that of ergot, is that the effect of the former drug is very transient, being oxidized in a minute or two, whilst that of ergot is much more prolonged, the effect lasting several hours after the administration of a single dose. The practical effect of injecting ergot into a man is to produce a rise in the systemic blood pressure much greater than that which can be obtained by any of the digitalis group of drugs. This increase of pressure is mainly vaso-motor, but is partly cardiac. The vessels which do not constrict are the coronary, cerebral and pulmonary, so that the lungs and brain, being congested, any bleeding from them will certainly be augmented. Injections of ergot are legitimate for the purpose of arresting hemorrhage only when the lesion is in some part of the splanchnic system.

Of the digitalis group of drugs three only require attention—digitalis, strophanthus and squill. Squill is much the most effective in constricting vessels, then follows digitalis, and, lastly, strophanthus, so that if the use of one of these drugs be desirable for vaso-constriction, that one should be squill. Now, squill produces its action on plain muscle in two ways—first, by exciting the nerve endings, and, secondly, the muscles; so that vaso-constriction does not, in this case, depend upon the presence of vaso-motor nerves. But, nevertheless, the effect of dosing with squill is much the same, as far as the vessels are concerned, as dosing with ergot—that is, the splanchnic vessels constrict, and the pulmonary and cerebral dilate passively. The latter vessels are relatively poorly supplied with muscle, and when the blood pressure rises

the feeble attempt which the drug makes to diminish their caliber is overcome by the augmented blood pressure. On the coronary vessels the same order holds, as Dr. G. S. Haynes has shown in this laboratory—that is, the squill is most active as a vaso-constrictor, and strophanthus least. This is particularly interesting because strophanthus is far and away the most toxic drug to the ordinary musculature of the heart, a good tincture of strophanthus being eight or nine times as toxic as a good tincture of digitalis, and yet it has comparatively little effect on the muscle of the heart vessels.

There are still other drugs which are occasionally used for their effect on vessels. They are veratrine, barium and certain of the heavy metals, particularly lead. These drugs act directly on all forms of muscle, and produce tonic contraction. Hence they produce considerable and very persistent constriction, lasting longer than that produced by a nervous action. But, again, what has already been said about squill applies also to these drugs; it is doubtful if they produce other effect than passive congestion of the liver, lungs and brain. Their only legitimate use is for intestinal, uterine or other hemorrhage from the splanchnic vessels, and even here it may be questioned whether their action is desirable.

I maintain that the tannins, adrenalin, digitalis and its allies, ergot, veratrine, barium and lead, are all worse than useless for hemoptysis or hemorrhage from the brain or the liver. Upon what drugs, then, can the physician rely in these conditions? First, it is of the utmost importance to prevent any stimulation of the heart or vaso-constriction, either of which may be produced very readily reflexly by any mental disturbance. The most efficient prophylactic is to diminish all sensory reflexes by means of morphine. Morphine has no action on the heart or vessels directly, but by inducing quietness, placidity and a desire for sleep, it prevents sudden movements, excitement, and other effects which induce cardiac acceleration and reflex rise of blood pressure. In this way it will probably do more good than any other drug.

There is another type of drug which it is possible to employ advantageously, that is one which augments the clotting power of the blood. Calcium is par excellence the drug for that purpose. It should be administered preferably in a dissociable form, such as the chloride. If the salts of calcium are taken by the mouth a certain time must elapse before sufficient reaches the blood to produce an effect on its time of clotting. Unfortunately, however, most cases of bleeding are urgent, and such that the administration of calcium by the mouth is of little value. In these cases the drug should be given subcutaneously. One or two grains administered in this way will diminish the time of blood-coagulation of a healthy man to about a half. For this purpose the calcium chloride should be neutral, and injected deeply into the subcutaneous tissue, so that as far as possible the local irritant action of the drug may be avoided. In these cases of hemorrhage perfusion with saline is occasionally performed. Dr. C. J. Coleman has lately shown that such dilution of the blood increases the time of clotting sometimes to two or three times that of normal. Perfusion is, however, rarely undertaken until the bleeding has ceased.

I should like to point out that it is a well known clinical fact that most cases of internal hemorrhage, such as hemoptysis, stop without assistance. It is not possible to draw correct conclusions as to the action of a drug from its administration in two or three isolated cases of bleeding. The cessation of hemorrhage after the exhibition of a drug, is, in itself, no proof that the effect was produced by the drug, and I cannot doubt that in many instances where such drugs as ergot have been employed to stop hemorrhage, that their action has been rather to delay the desired effect.

Intercostal Neuralgia and Neuritis.

We have had requests for treatment on these troubles, and would be pleased to have our friends give their opinions. Give something practical for the benefit of all and thus lend your aid to those who suffer from these distressing maladies.

[Written for the MEDICAL BRIEF.]

Peripheral Neuritis: Its Etiology and Treatment.

BY EDWARD MACKEY, M. D., (LONDON), M. R. C. P.

Late Senior Physician to the Sussex County Hospital; Physician to Royal Alexandra Hospital and Professor of Materia Medica and Therapeutics Queens College, Birmingham. Brighton, England.

For a long period of years, certainly from the early sixties, when I was associated in work with Francis Edmund Anstie, Julius Althaus, and Sir Walter Foster, I have been keenly interested in the subject of Multiple Symmetrical Peripheral Neuritis in its various forms and modifications. But I must confess with all humility, that in my early Birmingham days I knew very little about it. This, perhaps, is hardly surprising, for, although an admirable description of alcoholic paralysis was given by Lettsom in 1789, I am much afraid that his work had not then come under my notice. My ignorance was great, but I trust I have since atoned for it, and there is this to be said in mitigation that it was on a par with that of most of my contemporaries. In those days our standard text-book of medicine consisted of the admirable "Lectures on the Principles and Practice of Physic," by Sir Thomas Watson. Glancing, after this long lapse of years, through the two volumes of his fifth edition, published in 1871, I find no clear description of the disease. He speaks of various forms of paraplegia, and describes them in his characteristic and masterly manner, but he seems not to have realized that neuritis is a factor to be considered. In 1868 there appeared the second volume of Russell Reynolds' "System of Medicine," dealing with the diseases of the nervous system. Reynolds was then professor of medicine in University College, London, and a man of much learning. He entrusted the article on Neuritis to Warburton Begbie, of Edinburg, who, I fear, failed to make the most of his opportunities. He recognized, however, that loss of power, partial or complete, as well as various morbid sensations, might be due to disorganization or other permanent changes in the trunk of a nerve as the result of inflammation. He noted that the nerve most liable to this change was the sciatic, but he failed to distinguish clearly between sciatic neuralgia and sciatic neuritis. Even my friend, Anstie, in his classical article on Alcoholism, in the same volume, although on the fringe of the subject, unhappily failed to realize its importance. Those, however, were but early days; and those physicians were pioneers in the world of neuro-pathology. It is probable that Duménil, of Rouen, was the first to demonstrate the existence of neuritis by autopsy, but it was not till the researches of Lancereaux, in 1871, of Eichhorst, in 1875, and of Jeffroy, in 1879, that the pathology of the disease was placed on a firm scientific basis. Long anterior to this, however, certain anomalous cases had fallen under my observation, patients whom I now recognize as having been the victims of alcoholic or some other closely allied form of neuritis. Less was known then than now about toxins, and every obscure pain was attributed to suppressed gout. People drank freely of good old fruity port, and if they hunted three days a week and died of a good old age it was no one's business to inquire too minutely as to the exact reason for their departure. Now everything is changed; the world has become abstemious, and if we suffer from alcoholic neuritis the finger of scorn is pointed at us, and we have to refrain from overindulgence in self defense. We have become more virtuous, or possibly, our powers of assimilating the juice of the grape are not what they were when the generation was younger.

Passing now from historical retrospect. I come to the description of the disease as I have met with it in many years of practice. Incidentally I may mention that it was in 1894 in the *British Medical Journal* that I published my well-known case of peripheral neuritis in a boy of six years of age. He, I am glad to say, was not alcoholic, although alcoholism in the very young is not an unknown disease. His neuritis was acquired in another way, and was the sequel of whooping cough, a rare condition, and one not usually recognized. The poison of pertussis is, however, just as distinctly a toxic agent as alcohol, arsenic, lead or any of the other forms familiar to us. Digress-

ing for one moment before passing on to the symptomology of the disease, I should like to point out that the vast majority of these cases, as met with, either in hospital or in private practice, are alcoholic in origin. It is a condition far more frequent in towns than in agricultural districts. The farm laborer in most parts of England drinks beer often in quantities which are by no means inconsiderable, whilst in certain counties, Devonshire, for example, cider takes its place. Yet amongst these people peripheral neuritis is practically unknown. In London and many of our large cities, the consumption of beer is on the decrease, and whisky has, to a great extent, taken its place. These whisky drinkers furnish us with the bulk of our cases, the patients being men engaged in business, commercial travelers, salesmen, publicans and the like. And yet, in Scotland, where whisky is the natural drink, and is daily and hourly consumed, there is much less neuritis. It is difficult to avoid the conclusion that the quality and character, not only of the form in which the alcohol is consumed, but the kind of whisky, have much to do with it. In Scotland, and the further we go north, this is emphasized, "pot still" whisky is the staple intoxicant. In England, and the further we get from Scotland, "pot still" whisky, except amongst the educated classes, is unknown, and the ordinary frequenter of the public bar or small hotel is supplied with a concoction which, although sold under the name of whisky, is, in reality, a "silent spirit," made not from barley, but from potatoes, rice, or any form of starch which renders itself liable to fermentation and subsequent distillation. That this form of ethylic alcohol is especially pernicious, and especially potent in producing neuritis and other forms of disturbance of the nervous functions, I have not the shadow of a doubt. I say, then, that alcohol is the most common cause of peripheral neuritis, and that of alcoholic drinks, silent spirit, under whatever name it may be sold, is the most prejudicial. Although alcohol is the most common form of toxemia, it by no means stands alone. Lead is another excitant, and it matters little whether it is taken in the form of contaminated drinking water or whether it is introduced into the system as a trade poison. There are very many occupations in which lead is freely used, and we meet with cases amongst painters, compositors, glazers of playing cards and workers in Brussels lace. Sometimes there is more than one factor at work, for example, a house painter may be a silent spirit drinker, and when he comes under our care suffering from neuritis, it is by no means easy to say which is the predominant factor, the whisky or the lead. In the same category must be placed arsenic, and I think mercury. Cases of chronic arsenical poisoning are by no means uncommon, and in most of them tenderness over the course of the motor nerves, with loss of co-ordination and a condition verging on paraplegia, is observed. Even when the drug is given medicinally, as in the treatment of chorea in children, the loss of patellar reflex is one of the first indications that the drug has been pushed to the limit of safety. There have been epidemics of neuritis from the drinking of beer contaminated with arsenic. These are all examples of inorganic or mineral poisonings, but scattered through the literature of the subject will be found references to the production of obscure cases of semi-paraplegia obviously due to neuritis after the administration, usually accidentally, of bisulphide of carbon, aniline, roburite and phosphorus. Peripheral neuritis also follows in the wake of attacks of many of the acute specific diseases, such as diphtheria, influenza, septicemia, enteric fever, and the like. I think, too, that it is not improbable that tuberculosis should be included in the category, although the evidence on this point is, to my mind, less conclusive. In still another category must be placed the poisons of rheumatism, rheumatoid arthritis, gout, and above all, diabetes mellitus. Many people nowadays regard Landry's paralysis as a form of neuritis, but I can not adopt this theory, and hold that it is due to a specific organism, probably a tetracococcus. From this brief review of the etiology of the subject it will be appreciated that there are very many forms of peripheral neuritis, some easily recognized, and some of an origin probably hitherto unsuspected. At present we are not in a posi-

tion, from their clinical features alone, to differentiate them. Lead poisoning is, as a rule, easily recognized, and the symptoms of chronic arsenical poisoning we all know, but over and over again we see cases which are difficult to assign to any particular category, and respecting the exact production of which, even after the most careful examination, it is impossible to give a definite opinion.

The symptoms, fortunately, present little difficulty, although they vary much in different cases. Amongst the earliest symptoms are numbness of the fingers and toes, vasomotor spasm in the fingers, and muscular cramps, especially in the calves. In acute cases there may be constitutional disturbance, with elevation of the temperature to 103° or 104° F. The patient may, for a time, follow his ordinary occupation, but at last has to take to his bed. The paralysis affects the extensors more than the flexors of the limbs, so that he is unable to extend the hand, and the toes are pointed as he lies in bed. The interossei and other muscles are weakened, and the diaphragm and the vocal cords are paralyzed.

The muscles atrophy, and the change is early noticed in the anterior tibial, the extensor brevis digitorum, the calf muscles and the interossei of the hand.

The electrical conditions are altered. The reaction to faradism is diminished or lost, but the effect of the galvanic current varies. Sometimes complete reaction of degeneration is present.

Sensory symptoms vary considerably—anesthesia is generally limited to the lower parts of the limbs, but there may be hyperesthesia; gnawing or burning pains belong, especially, to the early stages. The nerve-trunks are tender, there is extreme tenderness of the muscles to pressure, well-marked in the muscles of the calf. The reflexes are lost. The bladder and rectum are unaffected, but the excretions are sometimes passed in bed in alcoholic cases. As the case progresses, the skin undergoes trophic changes. Contraction of the limbs arise, such as flexion of the elbow, and pointing of the foot, and adhesions form in and about the joints. Bedsores are not common. In alcoholic cases the paralysis is generally accompanied, and sometimes partly masked, by a condition of mind of which the essential features are loss of memory for recent events, and delusions as to events that never happened. The patient may be unable to tell his name, age, the day of the week, or where he lives, but may say that he has been for a walk or ride in obvious antagonism to facts. There may be a stage of talkativeness, or even delirium; but for the most part the patients show extreme apathy and complete indifference to surroundings. Often the symptoms are marked by inco-ordination and ataxy instead of simple paralysis. It may affect the arms or the legs, and may simulate locomotor ataxy.

The diagnosis of this condition presents very little difficulty, and it is unlikely to be overlooked by anyone practically familiar with the clinical features of the disease. It is said that it may be mistaken for gout, but this is impossible in a well-developed example of chiragra or podagra. What it might possibly be mistaken for is the allied condition to which the term goutiness is often applied, a condition due to the presence in the blood of uric acid, or some other products of defective assimilation. Neuritis, it is true, has been confounded before now with diseases of the spinal cord, notably locomotor ataxy, incipient general paralysis of the insane, and even the early stages of disseminated sclerosis. It is to be remembered that the patient, when first seen, is either in bed or comes into the physician's office supported on crutches or aided by the arms of a nurse. It is difficult to elicit any characteristic gait, for the patient can not walk, but if the attempt is made, the legs are not lifted freely from the ground, and in any case the walk is not that which we associate with induration of the posterior columns of the cord. The condition of the patellar reflex will not help us, for it is absent, both in tabes and in peripheral neuritis. But really the diagnosis is not difficult, for, if we press the fingers firmly along the course of the motor nerves of the arms or legs pain is at once elicited, and the patient gives audible notice of his suffering and discomfort. In locomotor ataxy there are iridoplegia, and other eye symptoms, but these are absent in neuritis. The absence of hypertonia, of the

perforating ulcer of the foot, of the Charcot joints, of the gastric and other symptoms known as crises, will help us in coming to a correct conclusion. Moreover, in tabes there is in at least ninety-six per cent of the cases a well marked syphilitic history, whilst in peripheral neuritis this as often as not is absent. Hysteria, of course, has to be considered, but really, in the great majority of cases, with the aid of a little care and reliance on solely objective symptoms, no error can be made.

The prognosis is grave, not so much with regard to danger to life as the prospect of an early recovery and ability to resume occupation. It is not a question of days or weeks, but of months, and these are amongst the most chronic cases with which we have to deal. They are the despair alike of the patient and of the physician. We are compelled to deal with them gently and considerately, and they call for the exercise of much tact and, above all, patience.

When we come to speak of treatment we are on much more debatable ground, and it must be confessed that there are large numbers of cases which, for a time, seem to resist our best endeavors to afford amelioration to the pain. First and foremost the patient must be confined strictly to bed, not for a day but for weeks and months. The bed-room should face the sun, and should be as light as light can be. It is customary nowadays to laud the efficacy of light treatment, and it is undoubtedly useful, but the light should be not that of the arc lamp, but nature's light, the light and warmth of the sun with all the benefit which can be obtained from its actinic and life-restoring rays. Warmth is useful, but it is not necessary to heat the room with a gas stove, or some similar appliance. Cover over the patient with blankets and rugs, and open the windows wide, so that the fresh air may at all times beat on his head and face and invigorate him. Feed him well, for without this he will make no progress. Give him three pints of milk a day, with refreshers at intervals of beef tea and meat essence, not the potted variety, but the home-made article. Keep him amused, and keep him interested in all that goes on around him. Let him have the newspapers, give him books to read, and do not ignore the influence of friends and visitors. He has a long and dreary fight before him, and all that helps and encourages him must be regarded as a beneficial therapeutic agent. Lead him to look forwards, and not backwards, and remember that Hope alone can do much in paving the road towards recovery.

With regard to drugs, I am dead against the administration of morphine and all narcotic drugs. I could tell many a sad story of the harm I have seen inflicted by these baneful and pernicious agents. What benefits it if you cure an alcoholic neuritis and substitute for it the drug habit? The last state of the man is worse than the first, and harm has been done, and not good. To begin with, I would get his bowels open. I care little what agent is employed for the purpose, but get the bowels open, and keep them open. My own proclivity, especially when the tongue is brown and furred, and coated, is for calomel. Not, however, be it said, in small and nigling doses, but in substantial quantities, say ten grains to begin with, and more to follow. If the skin is dry and inactive, I give a few doses of sweet spirits of nitre, or of the solution of the acetate of ammonium.

These preliminaries having been adjusted, I improve the dietary, giving less milk and beef tea, and more solid food, such as steaks and chops, with a plentiful supply of vegetables. I entertain the old-fashioned belief that phosphorus is a nerve food and tonic, and I take care that articles of food containing this element are freely supplied. It might, I know, be given as a medicine in the form of hypophosphites or the glycerophosphates, but I am not very fond of medicines, especially for habitual use, and in chronic cases, and where possible, I rely on the judicious selection of food. A useful form in which to give phosphorus is a combination of casein with the glycerophosphates.

The patient having been duly catered, for we have to consider what we can do to allay the inflammation and relieve him of his sufferings. For this purpose there is nothing better than belladonna, and I find it an excellent plan to smear the legs with equal quantities of extract of bella-

donna and glycerin freely, and all over, and then on the top of that to apply hot fomentations. The relief afforded is almost instantaneous. Of course, the belladonna is liable to be absorbed by the skin, and to give rise to indications of toxic action. I presume that the physician is well acquainted with all the symptoms of belladonna poisoning; if not, he should adopt some milder forms of treatment, or better still, confine his attentions to cases of a less serious nature. Hot air baths, massage, electricity and various forms of mechanical vibration are useful, but care must be taken that the patient does not pass into the hands of an empiric.

With regard to drugs which are especially recommended for the relief of pain, I do not think much of them. I do not like synthetical products, those especially of the coal tar series. I have given from time to time antipyrin, phenacetin, exalgin and the like. Exceptionally they act admirably, but too often they produce the most disagreeable symptoms, even in what are supposed to be quite moderate doses, It is by no means a pleasant thing to have your patient coming out all over in an urticarial rash; it is by no means pleasant to be sent for hurriedly, and to find your patient with a weak and collapsible pulse, and perhaps cyanosed as result of the treatment. Possibly I am prejudiced, and slow to adopt new ideas, but I am careful and conservative, and do not care to use drugs which sometimes play me tricks, and are, to my mind, if not unsafe, at all events unreliable. I prefer to treat the patient himself, and not the disease. If there is anemia, I give iron, and cure it before taking other measures. If there is syphilis, and I am always keenly on the lookout for its manifestations, I know what to do. If there is a gouty diathesis, I rely on colchicum and iodide of potassium, whilst for dilated heart, with emphysema and chronic bronchitis, I find nothing better than strychnine and digitalis. This may seem very simple treatment, but it is the result of many years of experience, and I must in candor admit that my results have not been unsatisfactory.

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The Wastage of Child Life.

BY W. B. DRUMMOND, M. B., C. M., F. R. C. P., EDINBURGH,

Assistant Physician to the Royal Hospital for Sick Children, Edinburgh.
Edinburgh, Scotland.

Is there a wastage of child life? Everyone knows that the mortality amongst puny children is very high. But a high mortality does not, of necessity, imply anything that can properly be called wastage. Throughout the entire animal and vegetable kingdoms we find that a high mortality among young things is the general rule. The poet tells us that out of forty seeds nature often brings but one to bear. So far as many living things are concerned this saying greatly understates the case. Many plants bring forth seeds by thousands, yet their numbers do not increase from year to year. Every codfish in the sea is the sole survivor out of millions. If every little codling that hatches out of the ovum were to reach maturity, it would not be long before the sea itself would be unable to contain them.

Now, the modern biologist has taught us that this extraordinary mortality is no needless or purposeless massacre of the innocents. Heartless, though it seems, it is simply nature's way of securing the succession of generations growing ever fitter for life's race. Nay, it is by this very process that there have appeared on our earth, at length, consciousness, and intelligence, and joy, and love. Man himhimself, is a member of the animal kingdom, and as such, is subject to nature's law. No argument is needed to support the assertion that he can retain his proud position as lord of creation only on condition of his continuing to take part in the struggle for existence, only by submission to the law of the elimination of the unfit.

Let us admit, then, without further argument, that a certain amount of mortality among young children is inevitable. Let us admit that there are actually born into the world a certain number of babies whom no protecting care, no foresight, no knowledge, can safely guide and guard through the dangers of infancy and childhood. The

question still remains, does this number correspond to the number of babies who do die year by year. The facts of child mortality have only to be stated to enable us to answer unhesitatingly, "No." A great many of the children who are born die from preventable causes, and it is these deaths which constitute the wastage of which I am about to speak.

The facts of infant mortality.—When we begin to study the statistics of the mortality amongst young children there are three facts which strike us immediately. They are these: The greatness of the mortality; the variability of the mortality in different districts; the uniformity of the mortality in any district at different periods of time.

(1). *The greatness of the mortality.*—To the popular imagination childhood presents itself as a period of superabundant vitality and energy. We think of a child as a rosy, laughing, restless being, a creature endowed with a healthy appetite, a tireless spirit, and a nature redolent of sunshine and fresh air. Childish ailments are thought of, as for the most part, trifling incidents which scarcely interrupt the current of joyous, exuberant life. Disease and death one associates naturally with old age. The statistics of child mortality always bring with them a feeling of shocked surprise. It seems altogether out of the course of nature that the mortality among children under five should be greater than the general mortality at all ages; that the mortality amongst infants under one year of age should be much greater than that of children under five. Infants, it is true, are helpless, tender creatures, but are they not constantly watched by loving eyes and cared for by tender hands? Yet, in all countries called civilized we find that a large proportion of these little beings, after a few short months or weeks of life, pass on to join the great majority.

(2.) *The variability of the mortality in different districts.*—The exact proportion of the infants who perish varies greatly in different localities. From Dr. Newsholme's valuable work on vital statistics (1899), we learn that in England and Wales in 1896 the infantile mortality—that is to say, the number of deaths of infants under one year of age to every thousand births—was 147.5 per thousand. For the ten years, 1885-94, the infantile mortality ranged from ninety-eight in Dorsetshire, one hundred and four in Wiltshire and Westmoreland, and one hundred and nine in Berkshire, to one hundred and fifty-three in London, one hundred and fifty-seven in Durham, one hundred and sixty-one in Staffordshire, and one hundred and seventy in Lancashire. Among the great towns it ranged from one hundred and thirty-one in Huddersfield, and one hundred and thirty-five in Croydon, to two hundred and twenty in Burnley, and two hundred and sixty-two in Preston.

In Massachusetts, in the twenty years, 1874-93, the infant mortality per one thousand births, ranged between 172.0 (in 1875), and 152.4 (in 1877), the mean being 161.9.

In Hamburg the mortality under one year old, in the years 1882-96 per one thousand, living at this age, has ranged from 201.9 in 1894, to 368.8 in 1886.

(3) *The uniformity of the mortality at different periods of time.*—The difference in the mortality in different districts is not casual, as is shown by the repetition of the figures year after year. A district which has a high mortality one year will have a high mortality the next, and a district which has a low mortality one year will have a low mortality the next. The high mortality among infants is maintained in spite of improvements in sanitary conditions. There has been during recent decades a gradual lowering of the general death rate. This is shown in the improved "expectation of life." The latest figures dealing with this subject have just been published by Dr. J. C. Dunlap in the form of a supplement to the forty-eighth detailed annual report of the Registrar-General for Scotland. This deals particularly with the decade from 1891 to 1900. The figures show that the prospect or expectation of life has considerably and continuously improved during recent decades. A male child born in Scotland in the 1891-1900 decade, had, at birth, the prospect of living 4.35 years longer than if born in 1861-1870, 3.73 years longer than if born in 1871-1880, and 0.76 of a year longer than if born in 1881-1890. A similar improvement in the

promise of long life has taken place in favor of the female child. In the case of boys born in the last decade of the century, the average "expectation of life" had risen to 44.68 years; in the case of girls to 47.44 years, and for the two sexes combined to 46.01 years. An English inquiry tells a similar tale of growth in longevity. But in spite of this improvement in the general mortality, the death rate among infants remains extremely high. There has been some improvement here and there, but it remains true that a death rate equal to that among infants is not again experienced until the age of about eighty years.

The amount of the wastage.—The justification of the term wastage is furnished by the figures which show that the infant mortality is very much higher in some districts than it is in others. The general rule is that the mortality is lowest in rural localities, and highest in mining and factory districts; compare, for example, the mortality quoted of ninety-eight in Dorsetshire, as compared with two hundred and sixty-two in Preston. These are not extreme figures. In healthy suburbs inhabited by the better classes, the infantile mortality may be smaller even than in Dorset, while the figure of two hundred and sixty-two for Preston implies a considerably higher figure for the worst parts of that town. In other words, we find that under certain conditions only five or six babies die out of every one hundred born, while in others thirty, forty, or even more, will die. To the difference between these figures the term wastage may not unfitly be applied. The argument is that these babies die, not because they are not fit to live, but because they do not have a fair chance.

To this point we shall return again. But there is another aspect of wastage to which it is now time to refer. So far we have been speaking of wastage as if it referred merely to unnecessary deaths among children. But we ought to think not only of the children who die but of the children who survive. Are the children who live as healthy and happy, as fit for the labors and for the enjoyments of life as they ought to be? If they are not, here is wastage again in another form. Now, it is safe to say that wherever a very high infant mortality is found, there also will be found pale and stunted and delicate children; children who have indeed survived the perils of infancy, but who carry with them for life the effects of the unfair treatment they have received. A high mortality and a degenerate people go together, twin effects of the same cause. A high death rate, therefore, is only a partial indication of the total wastage of child life.

The causes of wastage.—The principal causes of infantile mortality are as follows:

(1). *Prematurity of birth, and congenital defects.*—A certain mortality from these causes is, perhaps, inevitable. Children are born, for instance, with congenital defects of the heart, which are incompatible with life, or which render the child so weakly that death results from some trivial ailment. We do not know the causes of such defects, nor can we prevent or cure them. Prematurity of birth, on the other hand, is to some extent preventable, inasmuch as it is more liable to occur when the mother has to work during her pregnancy, or when the conditions of her life are otherwise unfavorable.

(2.) *Hereditary causes.* — Such as syphilis, or alcoholism, or insanity, have an influence in increasing the death rate among the children. Nevertheless, the children of such parents may be perfectly healthy.

(3.) *Unhealthy environment* in early childhood certainly greatly increases the mortality. As we have seen already, the death rate of infants is much higher in towns than in the country, and in towns it reaches its highest figure where slum conditions prevail.

(4.) *The occupation of the mothers* is a factor in the death rate, for it has been shown that in districts where many of the mothers are engaged in factory work a child's chances are not so good as in similar districts where the mothers are not employed in this way. Other factors, of course, co-operate, for it is obvious that if mothers resume work soon after recovering from labor the infants will necessarily be deprived, at least partly, of their natural nourishment.

(5.) *Inexperience, ignorance and carelessness on the part of the mothers.*—An

extraordinary large proportion of the deaths of infants results from disorders of digestion and nutrition. This means that the deaths are due to improper feeding. Not only are the children too frequently deprived of their mother's milk. but they are fed on all sorts of things which are totally unsuitable for them. There is no more frequent cause of disturbed digestion among infants than the common practice of giving them "just a little bit of what's going" at table.

Faulty feeding is, of course, only one of the fruits of maternal ignorance and carelessness, but it is the chief. And it should be realized that faulty feeding is not only a direct cause of death by producing such disorders as vomiting and diarrhea, but it also acts indirectly. A great many young infants die of convulsions, and in many instances these are the results of unsuitable articles of diet. Deaths from such disorders as bronchitis, and pneumonia, again may really be due to the child's vitality and power of resistance having been lowered by faulty feeding.

The remedy.—There can be no doubt that all that is being done by the health authorities to improve the sanitary conditions under which the people live, and to diminish the spread of infectious diseases, must have a favorable influence on the wastage of child life. Such authorities can insure a pure and sufficient water supply. They can condemn unsanitary property. They can compel landlords to put faulty drains in order. They can segregate cases of infectious disease. They are beginning to turn their attention to the problem of a pure milk supply. The employment of mothers and of prospective mothers periodically comes under discussion.

But, in spite of all that has been done the infantile mortaility shows very little tendency to fall. And if everything were done that can be done on present lines, it is probable that the improvement would not be very great. The fact of the matter is that we have been attending too much to people in the mass, and too little to the individual. And so it comes about that in the towns where the sanitary authorities are most vigilant we find people living under sanitary conditions which are too appalling for words. A pure water supply is a good thing, but it will not make people clean who have no wish to be clean. A pure milk supply would be a good thing, but it would not solve the problem of infant feeding. Model dwellings have their advocates, but there are people who would turn the best model dwellings into a slum in a week. The next step in sanitary progress must be to deal with the individual.

The application of this fact to the problem before us has resulted in some interesting experiments concerning wnich I shall proceed to give some account.

The first of these was carried out in the little commune of Villers-le-Duc, in France. During the years 1800 to 1893, the infantile mortality was very high. It is said that on an average one child out of every four died during its first year. The matter was taken seriously in hand. Rules were made which involved individual care of the mothers and supervision of the children. Free medical aid was provided for those who required it. A sum of money was also paid at the end of the year to the mother or nurse if the baby was produced in a healthy condition. The result of the regulations made was remarkable. For ten years no infant's death took place in the village. During fifteen years only one child was still-born.

The second experiment was carried out in England. It would be more correct to say that has been initiated, for it is still in progress. The seat of experiment is the large manufacturing town of Huddersfield, and its author is Mr. Broadbent, the mayor.

Mr Broadbent was much struck by the appalling large death rate which exists among infants in certain districts, and on setting himself to study the matter he soon became convinced that wherever the fault lay, it certainly did not lie with the babies, but with the conditions which surrounded them from their birth. And if the fault does not lie with the babies, if they are not lacking in vital force at their entry into the world, then it follows, to use Mr. Broadbent's strong language on the subject, that the babies do not die. They are killed.

In a lecture which the mayor recently delivered on this subject he declared that

overcrowding, slumdom, defective milk supply, employment of married women in factories, were all secondary causes in producing the existing dire effects among infants and children. The mischief rooted itself in ignorance and indifference, and, perhaps, in a degradation of the ideal of motherhood. The mothers themselves were not to blame. The blame laid with those who were responsible for their education and upbringing. Compulsory education has been in force in England for thirty-five years, and yet girls are allowed to grow up ignorant of the elementary duties of motherhood. How, then, can they be blamed if they are so ill-equipped to bring their babies safely through all the perils of infant life?

His remedy was to help the babies by helping the mothers. The mother herself is the only proper guardian for the child. For the mother's milk, for the mother's care, for the mother's love, there is no substitute at all. Whatever is done for the babies should and must be done through the mothers.

The plan which has been adopted in Huddersfield was tried, in the first place, in a limited district which is inhabited chiefly by factory workers, with a sprinkling of quarrymen, masons and laborers. The district has no congested population, and it has no slums. The population is five thousand three hundred and fifty-nine. The death rate for ten years has averaged 13.44, and the birth rate 19.39, whilst the infantile mortality figure has been one hundred and twenty-two per one thousand births.

Obviously this is a fairly healthy locality. A comparatively small number of married women go out to work, there being a strong public opinion against the practice. As the district is typical of many localities on the outskirts of manufacturing towns, it was decided to see if any appreciable effect could be produced on the wastage of infant life.

The plan adopted consisted in appointing a lady visitor as a sort of municipal god-mother to the babies. We gather that the experiment initiated as above described, has now been extended to the rest of the town. The ladies appointed as health visitors by the corporation now visit the children soon after birth, and leave a card of advice with the mother. The baby is then allotted to one of a band of voluntary helpers, who visits it periodically and exercises a kindly oversight upon it. These lady helpers do not administer charity, but they help the mothers with advice and sympathy. On various occasions, such as Christmas and Easter, little remembrances are sent to the babies, and at the commencement of the diarrhea season and at the onset of cold weather short personal letters of advice as to the precautions needful are sent to each mother through the post. Cases requiring sanitary attention are brought under the notice of the public health officials.

One part of the scheme remains to be referred to, and we have kept it to the last, because, when the experiment was first started, it received in the newspapers a too exclusive attention. This took the form of a promise to pay £1 as a birthday present to each baby born in the district above referred to between November 9, 1904, and November 9, 1905, on its attaining the age of twelve months. This promise was made by means of a legally drawn promissory note, printed on a card, on which was also given as much condensed good advice as could be compressed into the space. This card, of course, served the double purpose of exciting the interest of the mothers, and of serving as an introduction for the visitors to the various homes.

All this seems very simple. The entire scheme resolves itself into a friendly supervision of the mothers and babies. And the results? So far as the experiment has gone, the results are very good, indeed. As has been said, the average infantile mortality in the area originally included in the experiment has been one hundred and twenty-two for ten years; for the twelve-month period referred to, the figure is fifty-four. In other words, coincident with the measures described, the mortality has fallen to less than one-half. This is only an intermediate stock-taking, but as the time comprises a whole year with its varying seasonal influences, there seems no reason to doubt that an equally good or even better result will be obtained when a longer period has been

covered and additional experience has been gained.

The scheme thus happily inaugurated in Huddersfield, is so simple; it is so rational; it is so obviously on the right lines that there can be no doubt that good will be effected. How great the results will be remains to be seen, but there seems to be no reason whatever why other towns where there is a wastage of infant life—are there any where there is none? —should watch to learn these results before inaugurating similar schemes of their own. All that is wanted is a far-sighted, level-headed man whose heart is aglow with the spirit of the second of the two great Christian commandments. Such a man, in short, as Huddersfield possesses in its present mayor.

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The Umbilical Cord or Funis.

BY WM. H. HALLOWELL, M. D.,

Professor of Obstetrics Minneapolis College of Physicians and Surgeons, Medical Department, Hamline University. Minneapolis, Minn.

Umbilical cord or funis is the vital bond between placenta and fetus, composed of two arteries, one vein, the pedicles of Allantois and umbilical vesicle with surrounding Wharton's jelly encased in a sheath.

Average length, twenty inches, with extremes of no length to several feet.

Thickness, half-inch, but varying with amount of Wharton's jelly present.

Spiral aspect, from arteries winding around the vein. This may be absent or exaggerated.

Strength, expressed by breaking strain from five to fifteen pounds.

Attachments, to placenta on inner surface at middle, but may be eccentric or marginal, and other end to fetal abdomen.

Functions, duplex. The vein carries oxygenated nutritious blood from placenta to fetus. The arteries carry a carbonated waste-laden blood from fetus to placenta.

Both arteries and vein have a favorably increasing calibre in the direction of their blood currents.

Funic pulse is synchronous with the fetal heart-beat. Neither capillaries, lymphatics, nor nerves are present.

Anomalies.—Varying number of blood vessels. Forked or divided cord. Velamentous—attached to membranes before reaching placenta. Fused, interlaced and triple cords of twins. Unequal accumulations of Wharton's jelly. Vascular loops.

Excessive amount of Wharton's jelly calls for close ligation of cord at birth in order to compress the blood vessels, done by first pinching Wharton's jelly.

Absence of Wharton's jelly does not prove closed lumen of blood vessels.

Unequal accumulations and vascular loops may simulate knots. In forked and velamentous cord attachment there's danger of compression or rupture of blood vessels. The fused, interlaced and triple cords of twins may cause dystocia or fetal death. Tangling of cords in multiple pregnancy nearly always results fatally by asphyxia.

Pathological conditions of the cord are cysts occurring only after fetal death. May be serous or mucus from liquefaction of Wharton's jelly, or may follow apoplexy of the cord.

Calcarious degenerations generally due to syphilis.

Odema—Due to interference with circulation.

Syphilitic lesions — Indurated cord-thickening of vascular coats—gummata of external coat of vein—hypertrophy of arterial valves—stenosis by local periphlebitis.

Varicose veins may rupture and cause fetal death.

Inflammation of blood vessels.—Always due to septic infection which becomes systemic, and commonly fatal.

Thrombi (septic).

Hernia at umbilical end of cord.

Tumors, as myxoma, myxosarcoma, rarely sarcoma.

Blood extravasations.

Accidents to cord—Coils, knots, short cord (relatively) prolapse, compression, excessive traction, excessive torsion, rupture, strangulation by amniotic adhesions (due to oligo-hydramnion).

Coiling of cord around fetus, may include neck, body, limbs, or combine them.

It occurs about one in four pregnacies. Not dangerous, usually, but may cause fetal death.

Mortality, almost one per cent.

Around neck.—One to nine times reported.

Dangers.—Traction on cord and constriction of its blood vessels and cause asphyxia and cyanosis.

Fetal strangulation by compression of fetal neck, sometimes cutting through soft parts to spinal column.

The cord is compressed between nape of neck and maternal pelvis, so more dangerous in long labor, as in primipara, due to narrower birth canal than in multipara. More dangerous in male births—boys being larger than girls, and labor prolonged. Very dangerous in breech presentations, where compression of cord about the neck is added to the usual danger of cord compression between the maternal pelvis and the after-coming head. May change presentations, as vertex to face or transverse, due to traction or shortened cord, or neck coils, preventing flexion of head in mechanism of labor.

Coils around body and limbs may act as ligatures, and cause atrophy of parts beyond or intra-uterine amputation of a limb.

Coilings generally may result in a relatively short cord.

A short cord, naturally or relatively, is one that interferes with birth or drags on the placenta.

Dangers from short cord.—May cause hemorrhage by dragging on and detaching or tearing the placenta. Excessive traction on cord, with compression and closure of its vessels. Unusual pain at placental site. Retraction of presenting part between labor pains due to elasticity of cord. Uterine inertia from exhaustion in labor.

Rupture of the cord and fetal hemorrhage. Uterine rupture from strong ineffectual uterine contractions in labor. Uterine inversion from dragging on uterine wall.

Still births.—Trauma, hemorrhage and sepsis in the mother from manipulations to aid delivery.

Causes for coiling are long cord and all that allows very active fetal movements, as excess of liquor amnii, or small fetus.

Treatment for coilings.—Do not attempt to uncoil in the uterus, nor resort to version. At time of labor examine for loops about neck, and try to disengage by loosening and enlarging the loop. Slip over head. In some cases let fetus pass through loop. Often birth occurs without disengagement of cord, when sufficiently long. If impossible to loosen, apply two ligatures to the cord, cut the cord between them, deliver quickly, and resuscitate the child. If the cord should rupture during labor, deliver quickly and stop hemorrhage from cord.

Troubles from too long cord.—Coilings, knots, intra-uterine, compression and interruption of circulation, prolapse, cord entanglement.

Prolapse of the cord.—If it occurs before rupture of the bag of waters it is also called funic presentation.

There are different degrees of prolapse, from a small knuckle of cord in the cervix to a long loop hanging from vulva.

Causes for prolapse.—Abnormal pelvis, as faulty strait, causing imperfect adaptation of presenting part to pelvic inlet.

Faulty uterus, as shape—as large lower uterine segment. Position—as flexions changing axes of fetus and superior strait, and disturbing adaptation. Contractions—irregular.

Placenta attached low down, and cord nearer to cervix.

Faulty presentations as footling and transverse, and want of perfect adaptation of presenting part to lower uterine segment.

Twins.—Very often one is transverse.

Excess of liquor amnii and sudden rupture of bag of waters and escape of cord.

Cord caught on presenting part. Hydramnion and lower uterine segment flaccid. Relaxed uterus of multipara.

Dangers from prolapsed cord.—Greater in vertex presentations, due to greater pressure between head and maternal pelvis.

If membranes are unruptured, there is no immediate danger.

Prolapse has no influence on labor to the mother, unless manual or instrumental assistance to delivery is given.

Sudden cessation of fetal heart sounds is a sign of fetal death.

The longer the compression the greater the danger, so anything that may hinder or delay labor is dangerous.

Treatment of prolapse of cord.—Preserve membranes from rupture until complete cervical dilatation occurs. Then resort to manual restoration of prolapsed portion, to perform which, place patient in knee-chest position to cause a negative abdominal pressure, and gently push the cord back. Even though restoration is accomplished, it may return. Remain in knee-chest position until engagement of presenting part, this will hinder cord from returning.

Other methods.—A tape passed through a catheter and carrying prolapsed portion to uterus, but it may return.

In breech presentation, bring down feet and hasten labor.

In transverse presentation perform version.

In undilated cervix and membranes ruptured, resort to manual dilatation and perform version.

If cord pulsations cease, fetus is dead: so don't risk mother by manual or instrumental interference.

Knots of cord.—Local accumulations of Wharton's jelly and vascular loops may simulate knots, called false knots.

True knots are single, double or complicated, loose or comparatively tight: formed in early or late months. Those formed in early months are tighter than those formed in later months: the early-formed are more apt to interfere with circulation, and can be distinguished when untied by lessened amount of Wharton's jelly present. Knots do not usually interrupt circulation nor interfere with fetal vitality, but may cause fetal death.

At times they may slip along the cord during delivery.

In multiple pregnancy the cords may knot and entangle, and cause the death of one or both fetuses.

Causes for knots are long cord, excessive amount of liquor amnii, small fetus, active fetal movements.

Funic Souffle, a sound agreeing with the fetal heart rate. It is considered a danger sign, and generally means interference with funic circulation in umbilical arteries. It occurs in about fifteen per cent of pregnancies.

In very thin women a souffle may be caused by pressure of the stethoscope.

Lesions of cord during labor.—Injury or rupture of isolated vessels or the cord may be ruptured from sudden jerk in rapid delivery, or in street labors, woman standing, or in spontaneous precipitate labor.

Ligation of cord.—When, in absence of emergencies, wait until cord pulsations cease; this varies from a few seconds to ten minutes or more.

The funic pulse ceases progressively from the placental end up to the umbilicus, sometimes having ceased at the former while still strong at the latter.

Its cessation is due to pulmonary respiration and retraction of the musculatum of the walls of the arteries, usually normally performed in mature, healthy children, but a slight asphyxia or weakened pulmonary action may keep the vessels full with danger of primary and secondary hemorrhage from the stump of cord—if it should be cut and not ligated. Waiting for cessation of cord pulsation also saves blood to the child, it being aspirated into its body by strong pulmonary action. And waiting also prevents, in great measure, the classic initial loss of weight soon after birth.

Some claim that cord ligation is unnecessary, in imitation of lower animals, as the cat, and also some medico-legal cases cited in which cords of illegitimate children were cut without ligature, and no hemorrhage following.

But as there are factors, as mentioned, which may prevent a physiologically bloodless cord, in every case the cord should be carefully ligated. This is especially necessary in twin births in which neglect of ligatures on the cord of the first child may cause death by hemorrhage of the undelivered child, due to blood connections between the two placentas.

The practice is to pass two ligatures and cut the cord between them. Hold cord in palm of hand when cutting to prevent injury to fetus.

Where ligate. — Usually about two inches from the umbilical end, so as not to include the skin extension on cord from fetal abdominal surface, and also

not to include a knuckle of intestine, sometimes present, which, if ligated, would result in a strangulated hernia.

Kinds of ligatures used.—Almost any kind, provided it be aseptic; but a broad tape is the best, because tight ligaturing with thin, round material, may cut through vessel walls and allow secondary hemorrhage. Also scissors and all other contact with stump should be aseptic as a prophylactic against septic absorption and a general fetal septicemia.

When the cord is torn off close to the abdomen, compresses are sometimes useful, but the best treatment is acupressure, using two hairlip needles, passed at right angles to each other through the skin, but not to include the abdominal wall, and figure of eight turns with thread or other ligaturing material.

Treatment of stump of cord.—With all aseptic precautions fold stump in dry borated cotton, sometimes dusting with boric acid, and protected from rough contact by external objects by the bellyband usually worn, remembering that disturbance of a desiccating cord may cause secondary hemorrhage.

Falling off of stump usually occurs in a few days, but may not be detached for a week or longer. On falling off an excoriated or ulcerated surface may be left, which treat with antiseptic solutions and a mild astringent, as bismuth subcarbonate, and dress the part twice a day.

Umbilical fungus is sometimes met with, which secretes a sero-purulent fluid, and heals slowly—not sensitive itself, but the surrounding tissues may become painful. As long as the fungus exists the granulating tumor can not heal.

Scissor or knife removal is contra-indicated on account of the great hemorrhage resulting.

Better cauterize with nitrate of silver and use a salicylic acid bandage.

101 East Twenty-Seventh Street.

L. W. Bremerman, A. M., M. D., of New York City, has been appointed professor of genito-urinary diseases in the New York School of Clinical Medicine, to fill the vacancy caused by the death of Professor William K. Otis, M. D.

[Written for the MEDICAL BRIEF.]

Congenital Syphilis.

BY WILLIAM H. DAVIS, M. D.,

Professor of Dermatology and Venereal Diseases in the Denver and Gross College of Medicine. Denver, Colo.

Transmission by inheritance is one of the recognized fundamental characteristics of syphilis. A study of the facts relative to the transmission of syphilis justifies the following conclusions:

1. A syphilitic father may beget a syphilitic child, the mother remaining free from all signs of the disease; she becomes immune against syphilis through the placental circulation of the embryo (Colles Law). She may, however, later suddenly show tertiary syphilis without any previous symptoms. She may also only remain immune during gravidity, and become infected at any later period. She may, on the other hand, become infected during the time the fetus is in utero.

The transmissive power of the father is restricted as compared to that of the mother. The transmissive power of the mother is much more potent, prolonged and pronounced than that of the father.

When both parents are syphilitic, and the disease is of recent duration, the infection of the fetus is almost inevitable. The more recent the syphilis the greater the probability of infecting the fetus, and the greater and more marked the manifestations on the offspring. Hereditary transmission is more certain when parental syphilis is in full activity, but may occur when no active symptoms are present, that is, during the period of latency.

Both parents may be healthy at the time of procreation; the mother may contract syphilis during pregnancy and infect the child in utero, but infection is not probable if the maternal infection is after the seventh month of pregnancy.

The syphilogenic influence may be modified by the type of the disease, the age of the diathesis, specific treatment, constitutional peculiarities and other conditions imperfectly understood which influence heredity in general.

Time has an attenuating influence on the diathesis; as the duration of parental infection increases there is a progressive

enfeeblement of the transmissive power as shown in successive pregnancies. Abortion takes place at a more advanced period of fetal development; finally they cease to occur, a child may be born viable, but syphilitic. Still later children may be born having no traces of the disease.

The syphilogenic influence of the father is rarely manifest after the tertiary stage, but in the mother it is much more prolonged and active, extending to the sixth or seventh year, or longer.

Specific treatment may hold in abeyance the syphilogenic influence of both parents. A woman may have one or more abortions from the disease; if she be subjected to active treatment and pregnancy should occur, she may bring forth a healthy child, and if, after this the treatment be suspended, the next child may be syphilitic. The modifying influence of treatment is by no means certain. (*Prince A. Morrow.*)

Hereditary syphilis may be differentiated from the acquired form by its mode of origin and certain peculiarities in its evolution. In acquired infantile syphilis there is a primary lesion at the point of infection, and it does not differ from adult syphilis except in increased severity from an enfeebled capacity of resistance.

In hereditary syphilis there is a simultaneous development of both superficial and deep lesions, vesicular and bullar syphilides are common, and there are other lesions that are its exclusive product, when they are found in the young infant, such as peculiar changes in the bones, dental malformations, eye lesions, as syphilitic ectropion and iritis. One of the earliest and most characteristic symptoms is snuffles, due to syphilitic ozena, which gives the child great discomfort on account of interfering with breathing and nursing. The child loses its plump, well-nourished look; becomes thin, and refuses the breast. The first appearance of the disease in children with no manifestations at birth, usually shows itself in the first month in a ratio of sixty-four per cent; second month, twenty-two per cent. The earliest eruption to appear as to the point of time, according to Miller, who, in the study of a thousand cases in a Moscow foundling hospital, is the bullous syphilides in twenty-five per cent of the cases, erythematous syphilides in forty-five per cent. The latter begins on the lower part of the abdomen as minute oval or round spots that disappear under pressure, and invades the whole body in a week; then the lesions take on the characteristic coppery color, which will not disapear on pressure. The papular syphilide and its modified forms of the mucous patch and condylomatalata are common congenital lesions.

Mucous patches are frequently seen at the junction of the mucous membrane and the skin, as on the lips and around the anal orifice. Movements of these parts give rise to painful fissures, which constitute a sign of hereditary syphilis. A fissure at the angle of the mouth is said to be almost pathognomonic of syphilis. Fissures occur in about seventy per cent of the cases (Miller). Mucous patches appear in the mouth and condylomatalata occur where two skin surfaces rub together, and are flat, fissured, and ulcerated, and exude an offensive secretion.

The pustular syphilide may be general, but is usually more pronounced on the face, thighs and buttocks; they tend to group about the mouth, and are said to be indicative of profound syphilization. Ecthymatous pustules may develop later in the disease.

Vesicular syphilides usually occur associated with bullous and pustular syphilides. They are a rare form of severe early congenital syphilis; they occur closely packed together in groups on the chin, about the mouth, on the nates, forearms, hypogastrium or thighs, and are situated upon infiltrated brownish red bases.

Bullous syphilides frequently exist at birth, or they are the first syphilide to appear, and indicate severe form of disease. Their site of predilection is on the face, palms, soles; they are at first filled with sero-purulent contents which soon becomes purulent.

The tubercular syphilide is rare, and always a late lesion. It may occur as early as the sixth month, but usually much later as a relapsing syphilide, very much as it occurs in the acquired form.

The gummous syphilide is the latest manifestation of the disease, and is sometimes met with in early adult life as a congenital lesion of syphilis.

Kaposi regards the characteristic symptom of hereditary syphilis a diffused infiltration of the palms and soles, the skin of which is uniformly brownish, red, dry, shiny and fissured.

Prognosis.—The death rate in acquired syphilis is small; it rarely causes death, but of hereditary syphilis it is murderous. It condemns the offspring to almost certain death. Intrauterine death of the fetus is the common result; this may occur at almost any period, but most commonly between the third and seventh month. The child may come to full term and be still-born. It may be born alive, but syphilitic. It may be born apparently healthy, but soon gives evidence of the disease. About one-third of all the syphilitic pregnancies die in utero; one-third born alive die in six months, and an analysis carefully compiled shows only about twenty-five per cent survive. (*Prince A. Morrow.*)

Intrauterine death is often the result of changes occurring in the placenta, also from atheromatous inflammation and occlusion of the umbilical vessels interfering with the nutrition.

The skin is often macerated, the epidermis lifted in patches, and often entirely wanting over large areas.

If the fetus has reached an advanced stage of development, characteristic changes are found in the epiphyses of the long bones and in the internal organs.

If there should be no manifestations during the first year, the child has probably escaped infection.

909 Seventeenth Street.

[Written for the MEDICAL BRIEF.]

The New Psychology.

BY J. D. BUCK, M. D.,

Professor of Principles of Medicine and of Mental and Nervous Diseases in Pulte Medical College. Cincinnati, Ohio.

It would be an anachronism to speak at the present time of the science of medicine. Science means system, order, uniformity, certainty, and definite results. True, we have something of the methods of science, something of its achievements elsewhere, utilized in, and applied to, the study of both health and disease, and in the efforts to overcome its ravages. But empiricism is still everywhere in evidence, and uncertainty, confusion and often disappointment and disaster stare us in the face. The physician who is confident he can "cure" all his cases is either an inexperienced or shallow enthusiast, or a prevaricator. The physician of long experience and deep learning is apt to be the most ready to admit his uncertainty and frequent failures. People recover without aid of the doctor, and often die after much treatment and many consultations. All the way from "Christian Science," "Faith Cure," "Metaphysical Healing," down to "Dowieism," if the patient recovers the process employed, whatever it may be, is credited with his cure, and heralded accordingly. While death in any case is an "irresistible dispensation of Providence," plain and unmistakable. Nor can the most scientific physicians or methods be altogether acquitted of this empiricism, much as they may dislike or deny it. Perhaps its frank admission may be the most hopeful and certain release.

Now our ideas of disease and of health are based on the natural and inherent relation of structure and function, whether of any tissue or organ, or of the organism as a whole. Deranged organ implies deranged function, and vice versa. Histology, physiology and pathology here clasp hands. Nevertheless, we are frequently confronted by the fact that where grave disease exists, and death results, no appreciable or discoverable disorder of tissue or organ can be discovered. The theory is, however, that it must be there, whether we can locate or define it or not. This may be called the *mechanical theory of disease.* That it is, in a large sense, true, and that it has greatly increased our knowledge of pathology is true. But there is another side to the problem.

The foregoing method has led us into endless details; into categories of symptoms and pathological changes, such as require half a lifetime to master. The patient, *the man as a whole*, is almost lost sight of. Detail has led to specialization, so that a man's medical attendants are like the household attendants in the

old world, where caste defines and limits their duties, and they swarm like flies.

I am not denying any benefit or the finest achievements that have resulted from this drift of the times, though we may presently be compelled to halt and review the ground over which we have passed.

If the foregoing is true regarding our theory and treatment of disease in general, the defects are manifest in a magnified form when we come to mental diseases. Dropping for the moment recognizable diseases of the nervous mechanism, and regarding a very large number of cases of purely mental disturbance or alienation, we find our physiology, or pathology and our categories practically useless. We are driven from that view of the man of many parts—organs and functions—to that other concrete view of man as a *unit;* a *self-conscious, individualized intelligence.* Our categories seem practically useless, our patient is *insane,* and we know little of the "mind diseased," more than a name, and we often find neither cause nor cure.

Here lies the field of the new psychology. Recognizing all that our categories have taught us, and leaving this in the background, we are to study the modes and manifestations of the individual intelligence; the "Content of Consciousness." What it is, and how it acts, and the laws of its states and changes, can never be inferred or deduced from the study of the physiology and pathology of the nervous system. That the two are related goes without saying. We as yet no systematic knowledge of "the self and its states of consciousness," the purely psychological side of the problem. Not only so, but such knowledge is quite generally ignored, ridiculed or declared impossible. In other words, psychology, with the average physician today, is in the position that physiology occupied a century ago, when to *name* the "vital principles," was regarded as sufficient to explain all human phenomena.

Hypnotism has done something, when intelligently interpreted, to add to our real knowledge of psychology. But how seldom it is correctly and intelligently interpreted. There are three recent works that, taken together, illuminate this whole subject, viz., "The Great Psychological Crime," Professor William James' "Varieties of Religious Experience," and Mr. F. W. H. Myer's "Human Personality."

The new psychology is here launched in quite definite form, not on the boundless ocean of conjecture, but on a well-defined coast, with the chart of experience and the compass of experiment, fact, and law. Owing to materialistic bias, and contemptous and ignorant prejudgment, it may take twenty or fifty years for the average Sadducee among physicians to regognize the new psychology.

That a very considerable portion of the activities of man are basic, physical, and proceed from below the plane of action, is quite true. That another and very large, though exceedingly subtle group of activities proceed from above the plane of action—sift down into us from above, as lust and passion arise from below—is equally true. Hence, in the new nomenclature of psychology, we have the self, the *subliminal self;* and the *supraliminal self,* already adopted by the profession of leading universities.

Now, the bearing of all this new psychology on the recognition and treatment of mental diseases is already apparent. Our text books already contain the word *obsession,* which only a few years ago would have been simply sneered at, and our whole field of study in mental and psychic phenomena is being rapidly enlarged and illuminated as never before. Those who really care to *know,* need not be left in darkness, doubt or uncertainty.

Fifth and Walnut Streets.

[Written for the MEDICAL BRIEF.]

A Plea for More Humane Treatment of Advanced Cases of Tuberculosis.

BY FRANK C. WILSON, M. D.,

Professor Chest Diseases Hospital College of Medicine.
Louisville, Ky.

A total lack of humanity on the part of the large sanitariums toward the advanced cases of tuberculosis should be a subject of very severe criticism. Their refusal to admit these cases can only be accounted for by their fear of "injuring" the statistics of their institutions. In-

cipient cases are gladly received, and occasionally a moderately advanced case will be admitted, but the advanced and hopeless cases are not wanted. It is very much to be desired that our wealthy philanthropists, in the disposal of their charity for the establishment of such institutions, should make it a condition that proper provision should be made for the advanced as well as the incipient cases, irrespective of their effect upon the statistics. If necessary, they could be grouped under separate classes, but for humanity's sake they should be taken care of. If this were done the public would be better protected, for this dangerous class of cases would be taught proper sanitary requisites, and the community to that extent protected from infection. At the same time the segregation of such a large number of cases will afford an opportunity of testing the various methods of intreatment suggested. Among the hundreds of methods of treatment now being exploited some may be very valuable, many are known to be worthless, and a clinical test of the best of these treatments by large institutions for the tuberculous would be of untold benefit to the physician and to the public. If every method proposed were subjected to careful, systematic tests at the bedside of a large number of patients, and a co-operation and comparison of results between these large institutions were possible, after a sufficient length of time definite conclusions could be reached which would clearly determine the value or the worthlessness of a given remedy.

No physician, however anxious he may be to properly test a method of treatment, can have the same facilities that are accorded the sanitarium observer. Much time would be saved by such a co-operation, and the public would be protected from charlatanry and imposition.

It is most desirable to discover some method of destroying the tubercle, if that can be done without injury to the patient. While the natural resistant powers of the patient are not sufficient to accomplish this unaided, the trend of opinion in the professional mind in recent years has been to simply depend upon the natural powers of the patient, aided by fresh air and food. That many incipient cases can be cured in this way it must be granted, but it is certainly a rational proposition that if we can in any way, without injury to the system, destroy any portion of the germs which are causing the disease, it is a thing to be desired.

In the moderately advanced, and also the more advanced cases, it seems folly to trust solely to nature's efforts, even though assisted by fresh air and food. With millions of germs multiplying so rapidly and destroying the tissues so extensively, overwhelming the system with poisonous emanations and sapping the strength of the poor victim, is it any wonder that death soon closes the scene in this unequal contest? Is it reasonable that physicians should calmly watch such a contest without at least making an effort to assist nature in her combat with these germs. The vitality of these germs can be destroyed by agents if there can be found any way of introducing them into the system in sufficient quantity to accomplish this purpose.

I have, for several years, made use in a number of cases of a method of treatment employing two of our best germicides, employing as a vehicle an artificial serum, the exact counterpart of the natural blood serum, which, when introduced intravenously in the circulation without protest on the part of the system, carries with it a germicidal action which will immediately destroy every tubercle bacillus with which it comes in contact. This fluid, conveying nascent chlorine and ozone, is introduced to the amount of one pint without disturbance to the circulation, passing to the right side of the heart, thence directly to the pulmonary circulation, and if only a moderate amount of pulmonary tissue is involved in the tubercular process, it will permeate every portion of this area, destroying all, or at least a large percentage, of the germs present. If only a small area is involved in the process, I have seen a single infusion bring about a complete disappearance of the tubercle bacilli from the sputum, and the constitutional symptoms subside, and the physical signs disappear. If a large area is involved, then some bacilli may escape destruction, and begin to multiply, and the constitutional symptoms return in a few

weeks. If a second infusion is made, the results are permanent in many cases.

It certainly seems reasonable that if such results can be secured by this simple plan of treatment directed toward the destruction of the germs, and which does not interfere in the least with the use of fresh air and food, we should take advantage of it. Treated in this way a large percentage of incipient cases can be promptly arrested, of the moderately advanced cases many can be cured, and even some of the more advanced can, if persistently treated, either be greatly benfited or possibly cured. Can we not in this way materially aid in our fight with the Great White Plague?

405 West Chestnut Street.

[Written for the MEDICAL BRIEF.]

The Non-Operative Treatment of Strabismus.

BY JOS. S. LICHTENBERG, M. D.,

Professor Ophthalmology, Medico-Chirurgical College, Now Consolidated with the School of Medicine, University of Kansas; Ophthalmologist St. Joseph's Orphan's Home, Home for Aged, Etc.
Kansas City, Mo.

Stimulated by a series of successful cases in the treatment of strabismus by non-operative methods, and by several recent publications by Jackson, Wurdeman, Worth and others, I deem it best that this short sketch should bring the attention of the profession to the fact that this ocular deformity is, in many instances, amenable to cure without surgical interference.

In the present day furore for operations, it is the tendency to rush into surgery to the neglect of other methods. True conservatism may sometimes demand immediate and timely surgery, but in the condition under consideration in the majority of instances, in fact, nearly all instances, the need of haste is conspicuous by its absence.

As a rule, I have had no difficulty with my patients, after laying the facts before them, to gain consent to use the non-operative methods.

To successfully correct the deviation of the eyes by non-surgical measures, I wish to emphasize the great importance of early treatment. Worth in his recent book cites two cases of infants which he had under his care at the early age of one year and five months. In both of these cases glasses were worn, and other methods used with success. Worth also reports one case at the extremely early age of five months. So that the advice commonly given by the family physician to wait until the child is older, he may outgrow it, etc., is wrong. Many cases which could have been cured by non-operative measures require surgical intervention later, and then only a cosmetic result achieved.

The present aim in the treatment of strabismus, by any method, is not only the cosmetic result, but to restore binocular vision. This is always the case where non-operative measures are successful, which cannot be said of the operative methods, because conditions have been established by waiting, which render this impossible.

As a rule, when strabismus has become established for any length of time, there is a great reduction of vision in the non-fixing eye, and this is known as amblyopia exanopsia. The exact pathology of this condition is not clearly understood, but the clinical fact remains that these eyes do not recover their visual acuity under any treatment. To this general rule, however, I have found many exceptions, especially in young subjects. It is the amblyopia combined with the loss of binocular vision that early treatment prevents, so it is positive that any case should receive proper attention as soon as the earliest symptoms are noticed.

The non-operative methods of treatment may be classified as follows: First, optical or the exact correction of errors of refraction. Second, the occlusive bandage. Third, the suspension of the accommodation of the fixing eye by a reliable cycloplegic. Fourth, fusion training or orthoptic exercises. Fifth, bar reading.

The exact correction of refraction errors is of first importance. The rule is that convergent cases are associated with hypermetropia, and divergent cases with myopia, so that it appeals to any logical mind that the correction of these errors is rational. The ciliary muscle must be under the control of a reliable cycloplegiac, and there is none better than atropia. As a rule I order a one per cent solution dropped into the eyes three times daily for

three days, and then examine or test the refraction. In young children the strength of the solution must be modified. In young children, also, retinoscopy is the method *par excellence* in estimating the refraction. I know that I can measure the error within .25 D, so that we have in this an accurate method in which the observer sees for himself, and is independent of the patient. In older subjects the results by retinoscopy are proved by subjective methods as a matter of accuracy in the routine of adjusting glasses. The glasses prescribed must be a full correction or very nearly so.

The occlusion bandage is applied over the fixing eye for variable periods, from a few hours daily to several days. It consists simply of a pad of gauze and cotton, held in place by a bandage or strips of plaster. The object of the bandage is to force the use of the non-fixing eye, thus exercising it, so to speak, and, in many instances, the vision comes up and the amblyopia exanopsia prevented. With the same object in view the suspension of accommodation in the fixing eye is next used. The cycloplegiac, almost always atropin, must be applied to the fixing or better eye only. It is a fact that, in many cases the eyes remain straight during the time the accommodation is suspended in both eyes, but the old habit of using one eye only is kept up. If the atropin is applied to the fixing eye only, this forces the use of the nonfixing or worse eye, especially in near vision, thus again forcing its use. After several months of this treatment the vision of the nonfixing eye usually comes up, and then we test by the usual methods, such as a red glass held over one eye, prisms, etc., and try to elicit a diplopia. If the diplopia is elicited, we know that both eyes are being used simultaneously, and then we are ready to use the fusion exercises.

For this purpose we have the orthoptic picture in one form or another. These consist of two halves, which when combined, make the complete picture. For the purpose of having the picture in the act of binocular vision, stereoscopes are used, and there have been invented by Oliver and others adjustable ones, but I have found the ordinary cheap hand stereoscope to answer all purposes. However, the best instrument as yet devised, is the amblyscope of Worth (see illustration).

This instrument, to follow Worth's description, consists of two halves joined by a hinge. Each half is made up of a short tube joined to a longer tube at an angle of 120 degrees. These tubes are 1½ inches in diameter. At the elbow of each tube is a flat oval piece, on the inside of which is fitted a mirror. At the end of each of the long tubes is fitted carriers to hold the object slides, which are again two halves or portions of a complete picture. At the ocular end of the instrument are two lenses of five inches focal length, the distance of the reflected image, and serves to render the rays of light emanating from the pictures at the other end of the tubes parallel. An adjustable arc connects the two tubes so that their angle of separation may be varied or adjusted to each case. The advantage of this instrument is that the illumination of the two halves of the

picture can be varied. By giving the half corresponding to the eye that has the lowest visual acuteness a stronger illumination, and *vice versa*, it is stimulated more than the fellow eye and encouraged in its use.

By exercising the eyes at stated intervals with the amblyscope at the office, and by using the stereoscope with the proper pictures at home, in favorable cases the case goes on to a more or less rapid termination.

Bar reading consists of a strip of metal or board, about one-half to one inch wide, bent so as to hold the strip a few inches above the level of the reading matter. This is placed over the middle of the page, vertically, the result being that to see a line of print as a continuous and unbroken one, both eyes must be used in the act of binocular vision. This can be used only in older children, and in my hands has been disappointing.

In conclusion, I wish to call attention to these facts:

1. The advice usually given parents in cases of strabismus occurring in young children, is to wait, that the child may outgrow it, etc. This is wrong and pernicious.

2. Treatment should be instituted at the earliest notice of the condition.

3. In every case non-operative means should be tried, if possible, for a sufficient length of time before resorting to surgery.

1208 Wyandotte Street.

[Written for the MEDICAL BRIEF.]

Abdominal Operations Without Fuss and Feathers.

BY W. A. FORSTER, M. D.,

Professor of Clinical and Operative Surgery, Kansas City Hahnemann Medical College; Consulting Surgeon and Gynecologist to Hospital for Women and Children, Etc. Kansas City, Mo.

It has been the custom of surgeons in general to purge and scrub the patient to death, depleting him by so doing until there is no resistance left. Notwithstanding the fact that Dr. Moynihan has demonstrated that he can practically rid the intestines of bacteria by free purging, by so doing he takes the vitality of the patient. From practical experience and observation, I believe that the less fussing you do with the patient the better, provided, you get him practically clean. It has been my custom never to purge a patient prior to an abdominal operation unless he be badly constipated, and in case an enema will not answer. Ordinarily I give him an enema just prior to operating, and I find that under these circumstances there is much more resistance left on the part of the intestines and patient in general.

And he suffers less from shock, and less from the terrible nausea following operation, and there is less intestinal prostration produced by constipation and paralysis. It is a fact that most of the cases generally pronounced by the surgeons peritonitis are intestinal obstruction, due to paralysis of the intestines caused by depletion.

Another point in the preparation of the patient is the matter of drink. It is my habit to give my patient a glass of water fifteen minutes to a half hour before operation, which will sustain him and prevent the terrible thirst, and do much to prevent nausea after operation. Of course he must abstain from solid food for several hours prior to operation.

In the matter of scrubbing a patient prior to operation, the popular custom of shaving and scrubbing with a stiff brush give rise to pain and excoriates the skin and permits the entrance of infection through the abrasions. I get just as good results from shaving the patient the night before the operation and then preparing him for operation while he is under the influence of the anesthetic. Instead of brushes I use gauze sponges, which will cleanse the skin fully as well and produce no abrasion of the cuticle.

The habit of flushing the abdominal cavity with saline solutions I seldom practice because if there is any pus present it is diffused through the whole abdominal cavity and offers a greater opportunity for contamination of all the viscera and you subject the patient to a greater risk of infection. My plan is to mop out as carefully as I can with dry mops, leaving the peritoneal cavity comparatively dry.

By carefully cleansing the peritoneal cavity, drainage is not only not indicated as it was formerly, but the patient makes a more speedy recovery.

The practice of depriving the patient of a drink of water after operation is not only cruel but harmful. I have seen patients suffer for days after an operation for want of some water to drink. I give my patients a sip of water occasionally (not too often, or too much), which not only adds to the patient's comfort but aids materially in the recovery.

One of the most dreaded conditions after operation is nausea. I have found that by flushing the stomach or allowing the patient to drink all the water he can, he not only vomits easier without strain or retching but thoroughly washes the stomach, and if he does not vomit the water will pass through and accomplish the same object. This has been my most satisfactory method of treating nausea, not by compelling the patient to suffer by depriving him of water to drink, but by giving him more.

Rialto Building.

[Written for the MEDICAL BRIEF.]

Pleurisy and Its Relation to Tuberculosis.

BY FRANKLIN T. POEHLER, B. S. M. D.,

Professor of Diseases of the Chest and Clinical Medicine in Hamline University.
Minneapolis, Minn.

In this paper I refer to pleurisy only in its relation to tuberculosis. Pleurisy is an inflammation of the serous covering of the lungs or its reflection on the ribs and diaphragm. This inflammation is associated with more or less micro-organisms and frequently associated with the tubercle bacillus, either as primary tubercular pleurisy or secondary to tubercular disease of the lungs or other tissue; so that the question has frequently arisen whether pleurisy is not a cause of tuberculosis.

The ordinary mode of infection in tuberculosis is inhalation of the bacilli into the lungs, bronchi and air vesicles, causing tuberculosis directly or by the entrance of these bacilli into the lymphatic or vascular system, causing tubercular adenitis or inflammation of some of the serous membranes. The question arises then, what actually causes pleurisy and what is the final outcome? Of course, if all pleurisies were the starting points of tuberculosis then the future welfare of the patient might better be conserved by looking after and treating the predisposing condition, than by simply treating the local pleurisy. There are forms of pleurisy which are most undoubtedly tubercular, some even primary, others secondary to other tubercular processes and due to the invasion of tubercular bacilli into the pleura. We may have it first as an acute primary inflammation characterized by a sero-fibrous or purulent exudate. The onset of such an inflammation may be like that of an ordinary acute pleurisy or it may be insidious in its development like that of the latent form of pleurisy which eventually becomes tubercular.

Pleurisy may immediately precede pulmonary tuberculosis, be associated with it, or succeed it.

Second. As an acute pleurisy the result of extension from adjacent tubercular lung.

Third. A chronic, adhesive, proliferative tuberculous pleurisy characterized by great thickening and adhesion of the pleura, with tubercular infiltration of the thickened product.

A certain number of cases of consumption begin as tubercular pleurisy which invades the lung by contiguity or by blood infection. One of the most convincing facts in favor of the infection theory, which seemed established prior to the discovery of the bacillus by Koch, was the frequent occurrence of pleurisy as a forerunner of phthisis. It was held that the caseous product of pleurisy furnished the infectious virus, which, entering the blood, caused tubercle formation in various parts of the body. Thus one-third of the ninety cases of pleurisy, followed by Bowditch, terminated in phthisis. Prior to 1882 tuberculosis was supposed to be hereditary and little was known of its contagious character. In that year Koch revolutionized the accepted view of its etiology by demonstrating the tubercular bacilli.

Primary tuberculosis in a very large majority of cases begins in the lungs, and it is assumed that such cases are due to the inhalation of the bacillus of dried sputum in the form of dust.

Heredity as a causal factor in pulmonary tuberculosis is to be noted only as a predisposing physical deformity which is inherited. This departure from the normal may be noted in a general lack of resisting power to diseaase, especially a proneness to attacks of bronchitis, strumous conditions during childhood, abnormally narrow chests, in a flat thorax and lack of expansion of the upper lobes of lungs.

Likewise pneumonia, influenza and pleurisy are immediately predisposing factors, the inflammatory soil giving a good field for the tubercular germ.

Pleurisy may follow injury of the chest wall and lungs; chill from exposure to wet is an exciting cause. A weakly constitution and previous ill-health have a marked effect in lowering the powers of resistance to the influences that produce disease. This is especially evident in a liability to pleurisy among those who have a tendency to pulmonary tuberculosis. But in the majority of cases pleurisy occurs quite independently of any such conditions.

Examination of the effusion has shown that in many cases the disease is due to irritation of the pleural membranes by microbes, of which the most frequent are the tubercle bacilli, pneumococci and streptococci. But, of course, as in the case of pulmonary trouble, the inflammations increase the opportunity for the tubercle bacillus.

Out of forty-four cases of pleurisy examined, seven were purulent and thirty-seven sero-fibrinous.

In a series of sero-fibrinous pleurisies no micro-organisms were found.

The presence of staphylococcus pyogenes in a serous effusion does not mean that it will necessarily become purulent.

Absence of organisms in empyema points most probably to a tubercular origin.

Presence of diplococcus in serous effusion subsequent to pneumonia does not prove that they will become purulent.

Exclusive presence of Frankel's pneumococcus usually justifies a good prognosis, notwithstanding that a radical operation is best.

Of cultures made with fluid withdrawn from thirty-eight cases of sero-purulent pleurisy, twenty-eight remained sterile, while four showed pure colonies of staphylococcus albus.

Of the twenty-eight sterile, fifteen were cases of pleurisy and the affected region was the focus of a tubercular infection. One was a case of pleurisy developing into a case of pulmonary tuberculosis. Seven had suspicious signs at apex. Four were apparent cures.

In the bacteriological study of cases of sero-fibrinous pleurisy by Fesnet there were found:

Pneumococcus in twenty per cent of cases.

Staphylococcus in thirty per cent of cases.

Eberth bacilli of typhoid in five per cent of cases.

Tubercle bacilli in fifteen per cent of cases.

Undetermined in thirty per cent of cases.

Of one hundred and one cases of pleurisy examined, thirty-two were definitely tubercular, thirteen existed in patients with tubercular lesions of lung without definite proof of the tubercular character of pleurisy.

The pneumococcus cases on the whole ran a favorable course.

Those due to staphylococcus are more insidious in onset and terminate less favorably.

Cases due to Eberth's bacillus occurring in the course of typhoid are latent in their symptomatology and are often somewhat hemorrhagic.

The tuberculous forms tend to be dry and fibrinous. There can be no doubt that the tubercle bacillus is the most common cause of dry pleurisy and of pleurisy with serous effusion.

Many of those who recover from the effusion afterward suffer from the tubercular disease, especially of the lung. This termination is of too frequent occurrence to be merely a coincidence.

Many French observers believe that seventy-five per cent of all such cases are

of tubercular origin. This estimate is considerably higher than that of English or American observers, but the proportion of cases of tubercular origin is increasing year by year as the investigation of cases becomes thorough.

Examination of the effusions by culture methods often gives negative results; but inoculation of the serum into guinea pigs, where large amounts (fifteen cubic centimeters or more) of the serum are injected, is much more successful, many of them becoming infected even when the fluid appeared sterile.

Purulent effusions, if sterile, suggest tubercle bacilli as a cause; if not sterile it is probably always due to pneumococcus, streptococcus some other microbe.

Pleurisy due to pneumococcus may be primary, but is often secondary to pneumonia. The exudate into the pleura caused by the pneumococcus may be fibrinous, such as usually occurs in pneumonia; it is occasionally sero-fibrinous, but more frequently it is purulent. Pneumococcus is usually the cause of empyema in children, in many of whom no preceding pneumonia can be demonstrated.

Pleurisy is usually primary unless an interval of a day or more occurs after the defervescence of pneumonia before the symptoms and signs of pleural effusion set in; but there may be no interval, empyema beginning before the pneumonia ends, or the interval may be protracted even to several weeks.

Strepto-coccal pleurisy is a typical empyema of the adult. Infection may take place directly from the lung as from broncho-pneumonia, gangrene of the lung, pyemic abscess or tubercle; or from more distant parts, as from ulceration of the esophagus, abscess, caries of spine, etc. The germ may come from the blood in general diseases as septicemia, fevers, erysipelas, etc. Rheumatism and chronic Bright's disease are predisposing causes. If rheumatism is microbic, it simply means an extension of the disease to the pleura (and frequently pericardium).

In the case of chronic Bright's disease a certain proportion of them have been relegated to the tubercular pleurisies.

It is doubtless true that a chill or exposure to wet or an extension of some disease elsewhere, starts up a congestion and inflammation in the pleura; this condition may leave a good site for the tubercle bacilli later. Or the bacilli may be present with the other inflammation till long after the primary disease abates, or the tubercle bacilli may be the originating virus and be a tubercular pleurisy immediately. Yet a large percentage of cases of uncomplicated serous pleurisy are in good health for several years, at least after the attack. But many that are apparently well after two to five years develop tuberculosis later (fifteen per cent); in most of these cases, also, the disease being of a slow, rather mild type. But a very rapid tuberculosis may develop many years after the pleurisy, twenty years or more, so that the patient is never safe from the possibility of death from tuberculosis merely because his pleurisy lies ten, fifteen or twenty years behind him.

These pleurisies that are later followed by tuberculosis are, as a rule, the mild forms; they develop usually but one attack, and the fluid does not recur after tapping. Of course, the chronic form, which refills after tapping, is usually tubercular from the start.

But in spite of all this, many patients undoubtedly recover from pleurisy and die of affections in no way associated with tuberculosis, and at least, in a large percentage of those who are free from a tubercular family history, the ultimate prognosis is bright, with proper treatment. But in the hollow, narrow-chested and anemic, with doubtful family history, the prognosis is always doubtful, and in many cases the same precautionary treatment as in incipient tuberculosis should be instituted.

405 Syndicate Arcade.

For the enlargement and betterment of the *Oklahoma Medical News-Journal*, beginning with the January, 1907, issue, the *Oklahoma Medical News-Journal* will have a new editor, Y. E. Colville, B. S., M. D., of Chattanooga, Tenn. Dr. Colville has bought a half interest in the journal, and will devote his entire time to the editorial department, while Dr. Phelan will be the business manager. In this way the journal will be greatly benefited and enlarged, and will be more valuable to the profession than heretofore.

[Written for the MEDICAL BRIEF.]

Report of a Case of Puerperal Infection Treated by the Pryor Method.

BY C. K. FLEMING, M. D.,

Professor Gynecology and Abdominal Surgery Denver and Gross College of Medicine; Attending Gynecologist to Denver City and County Hospital and to Mercy, St. Joseph's and St. Luke's Hospitals. Denver, Colo.

Mrs. A., aged twenty-two; married ten months; primipara; confined the 25th of February. On the third day following she had a severe chill; temperature rose to one hundred and four; declined next morning, when it was followed by a slight rise for ten days. Temperature ranging from normal to one hundred and three or one hundred and four at night. She had been curetted following the first chill with no apparent benefit. Douches were given regularly, and the usual treatment was employed for puerperal infection.

I first saw her on March 6th, when she was brought to Mercy Hospital. Temperature at this time was one hundred and four, pulse one hundred and eight. Following her admission to the hospital she was sent to the operating room, examined, and thoroughly cleaned. It was found at this time that the uterus was six or eight inches in depth, the os patulous, and exuding from it was a purulent discharge. There was no tenderness or other sign of infection in the uterus or the pelvic cavity.

A complete laceration of the perineum was found which had been previously sutured, but suppuration had occurred, and it was necessary to remove the stitches in order to properly sterilize the parts. The uterus was irrigated with a fifty per cent solution of alcohol in water, and a drainage tube surrounded with iodoform gauze was placed to the fundus. Temperature next morning had dropped to one hundred and one and a half only. Pulse one hundred. The alcohol irrigation was repeated with no apparent result.

The symptoms continued about the same until the morning of the ninth, or the twelfth day following her confinement, when her temperature dropped to ninety-nine and a half, pulse remaining about a hundred. The next morning she was taken with a severe chill, temperature rising from one hundred to one hundred and five and three-quarters late in the afternoon, pulse still remaining in the neighborhood of one hundred. Her temperature dropped gradually, falling under uterine irrigation and removal of the packing and tube, and on the morning of the twelfth it was in the neighborhood of one hundred again. On the morning of the thirteenth her temperature was one hundred and one and three-quarters; during the day she had another chill, the temperature rising to one hundred and five and three-quarters again, dropping the following morning when another chill occurred, and the temperature again rose to one hundred and five and three-quarters.

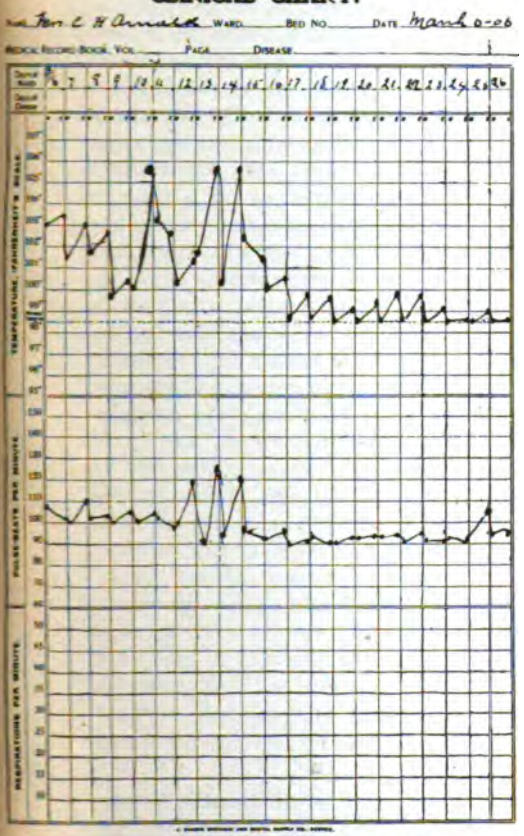
The patient appeared to be extremely ill, and it seemed that if anything was to be done to save her it should be done immediately. The question of hysterectomy was considered, and decided not feasible on account of the high mortality following such procedures in septic cases. After explaining the dangers of such an operation to her husband, it was deemed best before doing a radical operation to perform Pryor's operation, viz., the cul de sac incision and drainage.

During the past week she had received the usual treatment of forced nourishment, whiskey, strychnia, the subcutaneous salt solution and the use of streptolytic serum. The patient was properly prepared and sent to the operating room. An incision at least two inches in length was made into the cul de sac of Douglas. The peritoneum was found apparently healthy, and from the combined examination no involvement of the appendages was discovered.

In trying to incise the peritoneum we found that it was very readily detached from the uterus, so that it was stripped almost completely from its posterior wall. Although this was an accident, it impressed me as a valuable addition to the Pryor operation, for, from the denuded surface great quantities of serum exuded, during the succeeding forty-eight hours, thus depleting and draining the uterine tissues. Five per cent iodoform gauze

was packed carefully around the appendages and beneath the broad ligament; according to the directions of Pryor this gauze was allowed to remain for seven days. The morning following operation the temperature dropped to one hundred and two, and in three days it had reached normal, where it remained practically during the patient's convalescence. (See chart.)

CLINICAL CHART.



I believe this patient owes her life to the Pryor method. Had we performed a hysterectomy, as was first considered, it probably would have been fatal.

Puerperal fever is primarily a wound infection, therefore, a local disease. In its treatment we should follow the surgical principles which govern the treatment of infected wounds, viz., sterilization of the wound and drainage of the lymphatics.

In the majority of cases the uterine cavity can be sterilized by repeated uterine injections of antiseptic solutions, such as solutions of bichloride of mercury, etc. All abrasions of the vagina, tears of the cervix and perineum, if infected, should be cauterized with carbolic acid and alcohol.

Formerly results have been very good in similar cases where alcohol has been used in fifty per cent solution for irrigation of the uterine cavity, and in most cases will meet the indications; but there is a class of cases where the infection has traveled rapidly outside the uterus into the pelvic lymphatics, and it is in such cases that irrigation of the uterus will be of no service, and something more radical is necessary. In these cases some authors recommend hysterectomy, but I am firmly of the opinion that such patients will do much better by the Pryor method than by subjecting them to the more serious operation.

California Building.

[Written for the MEDICAL BRIEF.]

The Calciums.

BY S. R. GEISER, M. D.,

Professor of Materia Medica and Therapeutics in the Pulte Medical College; Attending Physician to the Bethesda Hospital and Consultant to the Protestant Home for the Friendless and Foundlings. Cincinnati, Ohio.

Therapeutics call for a method of treatent that has for its aim not alone the removal of symptoms, but the elimination of all the etiological factors entering into the production of the pathological lesions. It should also be our aim to remove the pathological lesions and bring about as nearly as possible a normal state in the organs implicated.

What constitutes a calcareous individual? A rational reply would be "one that needs lime." Would such a one be profited by filling him up with this solution? No, one who is by nature sick, one who is born so, born with an inability to digest the lime that is in his natural food, and consequently he grows large, fat but flabby, and in want of strength.

In looking for indications for a remedy we should not look for symptoms common or usual to other drugs, but rather for unusual symptoms; symptoms not be-

longing to other remedies. Of that class there are sufficient for reasonable results. I say for reasonable results, because we too often look for unreasonable ones from drugs, and overlook everything outside of the indicated remedy. On the other hand, we are oftentimes too willing to attribute unusual results entirely to the action of a drug. We should remember that all that can be expected of drugs in any disorder is that they remove obstructions and assist in bringing about a reaction, the cure to be left to nature.

A salient or leading symptom calling for lime is congestion, determination of blood to the head and to other parts, hot head but cold feet, but with these symptoms paleness of the parts, whether cold or hot. Calcium is often overlooked in some acute affections, as scarlet fever, measles and the like. To picture a calcium patient in our mind is not an easy matter.

It is said that as a rule calcium is of more service in the disorders peculiar to women and children rather than those of men, especially those of leucophlegmatic temperaments. Yet the rheumatism, gout and gastric disorders of men not infrequently call for calcium. The mentality of the calcaria carb. patient tends to melancholy, fear of becoming insane, poor memory, who is at the same time suspicious. The remedy will oftentimes establish a state of order, so that digestion and assimilation go on, the tissues are improved, and with them the mentality.

In treating mental disorders this drug is rarely thought of on account of the generally relaxed and flabby tissues; the woman flows too much and too often at the menstrual period. This great state of relaxation which we always find in calcaria carb patients is also manifested in leucorrhea and other catarrhal conditions. I have in mind a fat, flabby, nervous, suspicious individual, who, on account of excessive prolonged and frequent menstruation, had been advised to submit to curettement, who was entirely cured of this as well as of other unpleasant symptoms by the use of calcaria carb. While this woman was fleshy but flabby, she was anemic, pale, waxy, sickly, pale lips, pale fingers, in other words, she was chlorotic.

This was a case where we would usually think of iron, or, possibly, of the hemaboloids. This woman seemed ready to develop some malignant type of disease, other members of her family having gone that way. I am reasonably certain that health was restored to this woman and other similar ones by the persistent use of calcaria carb. rather infrequently prescribed.

It is a well known fact that calcium tends to attack glands, especially the lymphatics. Calcaria tends to resorb glands that are hard, sore and inflamed. Why is this? It is not yet completely known, but it is a fact, that if calcium is prescribed to a patient with a tuberculous tendency, for instance, the threatening disorder will be warded off for a time at least, provided the environment and other conditions be proper, nor will any other drug render as efficient service.

Again, the calcium patient is extremely sensitive to damp, raw winds, nor has he the mental ability to sustain any prolonged effort. This array of symptoms indicates that he is not assimilating the preparation of lime given in the food.

The respiratory organs furnish one of the best fields for calcium. It corresponds to just such constitutional weakness as is present in the first stage of tuberculosis. Calcium seems to at least suspend inflammatory conditions, and raises the condition of lowered vitality forces, and thereby dispels the tendency to take cold. Of course, a patient with tuberculosis will not be cured with calcium, nor any other remedy; it is in prevention lies our hope.

It is the remedy, pre-eminently, for partial sweats, as the nape of the neck, axilla, hands, knees and feet. In all these sweatings the surface is characteristically cold, especially the lower extremities.

In chronic sore throat I think that the calcaria carb. is too frequently overlooked. In persons who take cold easily and scarcely recover from one before acquiring another, calcium will assist in warding these off. These are but a few of the symptoms calling for the calciums, but they are sufficient to call attention to their importance.

The Groton.

[Written for the MEDICAL BRIEF.]

Vaginal Section.

BY BEN L. DORSEY, M. D.,
Professor Gynecology of Barnes University.
St. Louis, Mo.

Among the many maladies which are brought before us for consideration today, probably one of the most common, yet one which is fraught with danger, is that condition known as ventral hernia. Notwithstanding asepsis, technique, or the ability of any operator, the symptoms of hernia may become manifest not only months but even years after an abdominal section. The obsolete method of closing the abdomen with one single through-and-through suture has been the cause of bringing to our attention many of these unfortunate human beings. Even today, with the greater amount of knowledge which has been taught us by time and experience, we find the systematic closure of the abdomen by successive layers, viz., the edges of the peritoneum, the edges of the rectus and its sheaths, later the through-and-through silkworm gut, and finally the coaptation of the epidermis with horsehair or kangaroo tendon, the results are not what the surgeon might desire. Especially is this the case in that class of women who early arise from their beds, or commence their household duties too soon after operation. Even the abdominal supporter fails to perform its function. We have no means as yet of applying any contrivance which equals the natural support.

The vaginal route for operation offers us the only prophylactic when dealing with enlarged ovaries in size not larger than a hen egg; or in cases of tubal trouble, ectopic gestation, etc., where the growth is not larger than three inches in diameter. We are also able to remove, with comfort to the patient and satisfaction to the physician, fibroids of the uterus, where they are intraligamentous or of subperitoneal variety.

In many cases of pyosalpinx there is no means of removing the tube without any portion of its contents being distributed within the pelvic cavity while endeavoring to remove it through an abdominal incision. Again, we find a natural drain should be placed through the cul-de-sac of Douglas and out through the vagina.

We feel sure that had our knowledge in the past been equal to that of today many of our trusting patients would still be with us. We reflect with horror upon the great amount of danger done in our work by the use of the old glass vaginal drainage tube.

I often wonder if my fellow practitioners stop to consider the large doses of salines which were given in order to produce the necessary catharsis, when the real cause of the obstinacy of the bowels could have been determined by a consideration of the unnatural pressure which was placed in a very vital spot—commonly called the abdominal drain.

Vaginal section means much to those who are young and unmarried. An ovary may be removed, or a part of both ovaries, the tubes, or even small abdominal tumors, without the knowledge or the ability of anyone to determine later in life. This fact alone should cause us to be conservative and not produce unsightly scars, abdominal hernias and fistulous openings.

A cystic ovary which contains even a pint of fluid can easily be removed via the vagina. The pelvic cavity may be entered by an incision between the uterus and rectum. This vaginal incision should be made from one and one-half to two and one-half inches in length, and where necessary on one side an incision may be extended upward through the ligaments, ligating the uterine artery. Through this triangular opening the index or middle finger can be introduced, making it possible to palpate the pelvic organs on the affected side without danger to the uterus from lack of blood, owing to the supply of the opposite uterine artery.

Pelvic palpation may often determine a large ovarian cyst or hematosalpinx, pyosalpinx, hydrosalpinx, and even ectopic gestation, the size of which may be reduced by the use of a trocar. Especially is this true where the ovaries are cystic and contain a pint or more of fluid. When the contents of these escape

through the trocar there will be a collapse of the tubal walls, which may then be drawn through the vaginal orifice without any great danger to the patient. The stumps may be ligated, the abdominal parts removed, and after a moment's careful inspection, noting that there is no bleeding, they should again be returned within the pelvic wall. After inserting a sterilized rubber tube, or even a gauze drain, in the opening, the patient is placed in bed where recovery should rapidly follow.

Century Building.

[Written for the MEDICAL BRIEF.]

Chronic Atrophic Gastritis.

BY SIMON P. SCHERER, M. D.,

Professor of Diseases of the Digestive System and Physical Diagnosis in the State College of Physicians and Surgeons. Indianapolis, Ind.

In our treatment of a disease so important as gastritis, it is of the utmost importance that we are positive of our diagnosis. There is no distinct condition of the stomach so often erroneously diagnosed as gastritis. Many dynamic affections are called gastritis, and it is a common practice for the patients to make their diagnosis and name their diseases "catarrh of the stomach." There are two pathological processes inseparable from every chronic gastritis. First, the hypertrophic variety with proliferation of the connective tissue, and in some cases cystic degeneration of the gastric tubules. Second, variety, the one which I wish to discuss, the atrophic form, whose pathological change is contraction of the connective tissue, loss of epithelium and partial or complete destruction of the gastric glands.

In making a diagnosis of atrophic gastritis it becomes necessary to exclude all other forms of stomach disease and to bar out the dynamic affections, many of which are confused with gastritis in some of its forms. In atrophic gastritis we are dealing with a distinctly anatomical disease, one whose mode of onset is as insidious as it is incurable. This form of gastritis is brought about by an aggregation of abuses and little accidents gone to seed. Usually this pathological condition is produced by poor food, improperly prepared and badly masticated; therefore atrophic gastritis is a disease frequently occurring in the poorer classes of shop and factory workers, living in bad quarters, and using coarse foods of poor quality, and very badly prepared, as a large percentage of the food consumed is only half-cooked.

The diagnosis of atrophic gastritis can only be made by the application of all the modern methods of diagnosis, for in this disease we have many symptoms foreign to the location of the pathological changes visible. For instance, we have anemia from subnutrition, kidney symptoms often occur as a result of intestinal indigestion, and an overworked liver; grave disturbances of motility, secretion and absorption; impaired motor power of the stomach, diminished quantity or absence of free hydrochloric acid and in the more severe cases complete achylia. Fermentation, belching, eructations, soreness of the entire stomach muscle, nausea, vomiting, first one symptom then another will appear then be entirely absent for a time, recurring after abuses of food and overexertion. One of the most constant symptoms is loss of appetite, although in some severe cases I have seen intense hunger and bulima, but after a full meal the patient usually vomits. This intense hunger is accounted for by subnutrition and reflex disturbance to the hunger center which is in the brain, instead of the stomach.

Physical appearance of the patient is usually one of cachexia, loss of weight, tired, haggard expression, stomach bulging forward, very tender, even the clothing becomes painful by pressing the stomach in any way. In the early stages we find free hydrochloric acid, but usually diminished. Later on, no free hydrochloric acid but a lower percentage of combined HCl, still later no secretion of hydrochloric acid, either free or combined is found and that proves complete atrophy of the gastric tubules verified by the absence of labzymogen. In the earlier stages we have constipation, but after the gastric glands have become atrophied severe diarrhea usually appears, due to the absence of proteolysis in the stomach and

the influence of irritating stomach contents thrown untransformed into an already insulted intestine. I have frequently relieved a diarrhea of several years' duration by the administration of dilute hydrochloric acid before and after meals. When albuminoids are reduced to peptone in the stomach, either by natural secretions or artificial means, the relief of diarrhea in these cases is usually assured. I found that during constipation associated with any form of gastritis that the use of resinous laxatives and castor oil is of greater importance than mercurials or saline laxatives. The latter, when administered in doses sufficiently large, often adds to the anemia already existing. When compensatory digestion by the intestine ceases we have paroxysms of diarrhea, which are often preceded by more or less severe duodenitis and catarrhal icterus, the so-called bilious spells of the old gastritis cases in which the stomach has failed to perform its function. The intestines are overworked, and irritating peptone gains access to the entero-hepatic circulation in large quantities until the epithelial cells in the liver are so overworked that they rebel, with the results above described.

In the more advanced cases with poor motor power and much retention of mucus, coated tongue, millions of bacteria are formed in the stomach from fermenting food, and gastric lavage is of great benefit to the patient, preferably used in the morning preceding breakfast, or at least four hours after the meals. I use lavage water containing two ounces to the pint of a saturated solution of salicylic acid, or a five per cent solution of dilute hydrochloric acid, which changes the flora of the stomach and disturbs the breeding grounds of fermentative and pathological micro-organisms. I have frequently increased the secretion of hydrochloric acid in the earlier stages of this disease by intra-gastric faradic electricity, using an Einhorn deglutible electrode, and Monell's high-tension faradic battery, with his dosage regulating device, making it possible to control the current to a nicety.

Of all diseases of the stomach where electricity is indicated, there is none in which the results are more pronounced, both in regard to secretion from the gastric tubules and increased motor power of the stomach muscle, than the use of faradic currents in atrophic gastritis. When the secretory function is almost destroyed, the patients have noticed marked benefit from intra-gastric electricity, and I have conclusively proven by test meal examinations that intra-gastric electricity does stimulate the secretion of hydrochloric acid, unless the gastric glands are completely atrophied.

In summing up my experience over a period of ten years of special work in gastro-intestinal diseases I conscientiously say that I believe there is no branch of internal medicine where the results of treatment are more satisfactory to the patient than the service rendered the cases of chronic gastritis, after a thorough and painstaking examination is made and a positive diagnosis assured. These cases are often turned away as incurable, and lead lives of misery, finally dying from cirrhosis of the stomach.

The dietetic treatment of gastritis, as in all other forms of stomach disease, is of very great importance, and should always be based on the chemistry and motility of the stomach, but space will not allow of its description here.

513 North Delaware Street.

[Written for the MEDICAL BRIEF.]

Dementia Paralytica.

BY T. C. BIDDLE, M. D.,

Professor of Mental Diseases in the Kansas Medical College; Superintendent of Topeka State Hospital.
Topeka, Kan.

It is difficult to treat satisfactorily a medical subject upon which a book might be written in the scope of a paper. Such a subject is dementia paralytica, and it is my purpose only to attempt to briefly scan the more prominent symptoms of a brain disease that is important to the general practitioner, because he is not infrequently called upon to treat the disease, especially in its incipiency. It is doubly important that the disease be diagnosed early, for the reason that only in the earliest stage can any benefit be expected from treatment.

Paralytica dementia suggests itself to me as being the best of several synonyms that are employed to express a pathological condition of the brain that is of increasing importance. I say increasing importance advisedly, because the disease is increasing in frequency. Suggestive of the fact of the great increase of the disease, I will state that ten years ago, during my connection with the Osawatomie Hospital for Insane, we rarely had more than five or six cases of the disease in the Hospital for Insane, at a given time; while in the Topeka Hospital we have had an average attendance of about twenty-five cases of paralytica dementia during the past two years.

The synonyms of the disease are paretic dementia, general paralysis of the insane, general paresis, or paresis.

Burr defines the disease as displaying slowly increasing mental impairment, disorders of muscular movements, gastric and other nervous crises, disturbance of the higher reflexes (inco-ordination) and mental and physical decay.

Paralytica dementia appears to be a disease that is associated with modern civilization, and is seen chiefly in America and Western Europe, and seems to bear a relation to the advanced civilization of those countries. Until recent years it was rarely recognized in women. At this time a few cases are found in females. Of the thirty-two cases admitted at the Topeka State Hospital during the past two years, four have been women, but two are now resident. It is a disease of middle life, a majority of the cases appearing in the decade between the thirty-fifth to forty-fifth years. Of the thirty-two cases admitted to our hospital during the past biennium, twenty-three are with the ages above given. A few cases appear in earlier life, and occasionally one appears in advanced years. Our youngest case admitted was thirty-one and the oldest fifty-three.

It is observed chiefly in persons of irregular habits who have been addicted to various excesses, who have had syphilis, alcohol habitues, and those who, from one cause or another, have exhausted nervous systems. Syphilis is the predominating cause of paresis. Some observers believe it to be an exclusive cause. I do not agree with this extreme view, yet I am in sympathy with those who regard syphilis as entering into the causation of at least seventy-five per cent of cases. Of our thirty-two cases, syphilitic history is elicited in only seven cases, or a percentage of twenty-two, but it must be considered that it is not always possible to elicit the syphilitic history when present. Some deny it wilfully, others are not conscious of its presence, while many are too demented to understand or express information correctly.

The disease is likely to attack persons of high-strung, nervous organization, intellectual men of affairs, actors, statesmen, professional men, those accustomed to working at high pressure.

Pathologically the disease is a meningo-encephalitis. No other brain or mental disease presents such pronounced pathology. There is degeneration of the cortex and a low grade of inflammation of the cortex and membranes. In advanced cases there is atrophy of the brain, the convolutions are shrunken, the sulci being filled with inflammatory debris. Adhesions of the pia mater to the cortex are found post-mortem, and the membranes are adhered to each other. The arteries and arterioles are contorted and friable.

Of the clinical history of the disease the symptoms may be divided into two classes, the physical and the mental. The mental disturbance is usually consistent with a state of exaltation, and change of the emotional state. In the early stage of the disease, change in the individual's character is observed. The careful, prudent business man becomes visionary and erratic, given to foolish speculative investments and the like. The steady man becomes unsettled and changeable. The individual of good habits becomes intemperate and given to licentiousness. The person of even temper becomes irritable and quarrelsome, especially if he is opposed in his unusual conduct and undertakings. In this early stage, his ideas are likely to be expansive in character, having large ideas of business, entertaining impracticable schemes, engaging in unwise investments, or dissipating his estate in extravagant

purchases. He becomes careless and indifferent in his affairs, neglects his duties, and is in every way unreliable. With the progress of the disease, the psychical changes become more pronounced; the expansive ideas develop into delusions of grandeur, in which the man believes he is possessed of great wealth, or that he is a person of great consequence, or perhaps his delusions are on the line of unlimited physical power. He owns all of the wealth of the world, or he is the strongest man of the age.

Patients suffering from paresis are rarely irritable unless opposed in their undertakings. They are governed in their conduct by a sense of well being. They are cheerful, happy and comfortable. Throughout the course of the disease, even into the lowest stages of dementia, they will answer inquiry concerning their health with the stereotyped phrase: "First rate." This, even when the motor disturbances scarcely enable them to utter the words. This expression is so characteristic of the disease that it has been called the "verbal formula of a hopeless malady."

Periods of furious and unreasoning excitement sometimes occur during the progress of the disease. These, as a rule, are of brief duration, in which the patient loses all self-control and is noisy and destructive.

Progressive mental deterioration is the most unvarying history of the disease, though rarely remissions in the progressive decline are observed. The remissions are only temporary in character to be followed by relapse and further mental decay. The deterioration progresses until, in the late stages, all mentality disappears and the patient lives merely a vegetable existence.

The developmental stage is, in a few cases, maniacal in character. I have seen several cases of paresis that were thought to be mania with all the psychical disturbances of mania present, and the physical signs of paresis obscure or not present. These cases, after subsidence of the stage of maniacal excitation, pursued a consistent history of dementia paralytica.

Again, there is an occasional case that is associated with depression. The depressive types are associated with most grotesque delusions of hypochondria, together with exaggerated depression, though the delusions of personal unworthiness, characteristic of melancholia, are not present.

One case of depressed type of paresis that died of fatal cerebral congestion, contended that his stomach had been changed to metal, and insisted upon an X-ray exposure in order that he might convince us that he was correct.

Of the physical signs, no other brain disease presents a sequence of symptoms that are so certainly diagnostic. In not all cases are the physical signs so perfectly marked, but where present they render the diagnosis a matter of little uncertainty. In many cases when advanced to full development, to hear the patient speak or observe his movements and facial expression, causes the experienced observer to intuitively recognize paralytica dementia, as you recognize a case of tabes.

Motor disturbances appear early, and consist first of fibrillary tremor, especially marked in the protruded tongue. The hands tremble, particularly when engaged in some complicated movement, like buttoning the clothes or writing. The writing of a paretic is quite characteristic. Muscular twitchings of the facial muscles are often present. Pupillary changes are the rule. These changes may be inequality of the pupils or sometimes dilatation of one or both, but more frequently the pupillary disturbance consists of immobile pin-hole contractions. The Argyll-Robertson pupil is often found.

With the development of the disease, the ataxic gait is present in almost all cases. Ataxia is not infrequently so pronounced as to render the man nearly incapable of locomotion, and closely resembles tabes. These cases are known as the tabetic type of paresis. The condition is doubtless due to involvement of the cord in the inflammatory change.

The most characteristic symptom of paresis, and the one that is the most pathognomonic, is that of speech disturbance. It consists of an indescribable indistinctness of articulation and slurring of words, in which letters and syllables are omitted. When associated with the peculiar starting and twitching movements of

the lips that is usually present, it is most suggestive of the disease.

More frequently exaggerated reflexes are found, yet often the opposite is present, with complete loss of reflex movement. Commonly there is changed facial expression, due to loss of nerve tension of the muscles, giving the face a characteristic expression, in which the natural lines and grooves of the face are absent. This is sometimes called the paretic mask.

The history of paralytica dementia is progressive; the case goes on from bad to worse, the symptoms becoming more pronounced with occasional periods of remission. At any time during the progress of the case seizures of an epileptiform or apoplectiform character occur. These seizures are the result of severe congestion of the brain or actual effusion of blood into the brain. A recent post-mortem in a case that had died suddenly in a fatal apoplectic attack, showed a large subdural hemorrhage. Congestive attacks may be fatal, but usually, under proper treatment, they recover from the attack, but with each recurrence the signs of the disease are more pronounced, and the patient declines into a lower grade of dementia and helplessness.

Of the differential diagnosis, alcoholic pseudo-paresis is the most difficult. Both the psychical and physical symptoms of true dementia paralytica may be present in pseudo-paresis. There is, however, a difference in the clinical history. In pseudo-paresis there is not the progressive decline, both mental and physical, that characterizes dementia paralytica.

The history of alcoholic excess will be suggestive of the type of disease. Not infrequently we can reach a correct diagnosis in the two conditions, only after protracted observation and study of the clinical history. It is sometimes difficult to determine where a case of depression is melancholia, or the depressed type of paresis. My experience leads me to believe that there are not many cases of depressed paresis; elation is the rule. The grotesque hypochondriacal delusions of paresis, together with the absence of delusions of personal unworthiness that are characteristic of melancholia, and the physical signs of paresis will enable us to complete the diagnosis.

The prognosis in paretic dementia is altogether unfavorable. The average duration is three to four years, some cases pursuing a rapid course to fatal termination in three to six months; others may live six to eight years. In the terminal stages they become helpless and bedridden, lose all control of the sphincters, and are most untidy and disgusting in their habits. Trophic disturbances appear in the course of the disease, rendering it necessary to exercise the greatest care to prevent bedsores. The bones become friable, and are sometimes broken as the result of surprisingly little force.

The prognosis suggests that little can be accomplished with treatment. The most satisfactory feature of the treatment is that of the congestive attacks, which consists in the heroic application of cold, large ice bags to the head, and ice or cold packs to reduce the temperature. Without the use of cold, a large percentage of these patients will die in congestive attacks.

Topeka State Hospital.

[Written for the MEDICAL BRIEF.]

The Care of Feeble and Premature Infants Without the Aid of An Incubator.

BY A. B. CATES, A. M., M. D.,

Professor of Obstetrics in the Medical Department of the University of Minnesota; Obstetrician to the Northwestern Hospital, Bethany Home, etc. Minneapolis, Minn.

The country practitioner is rarely prepared for the most modern treatment of the premature child. The Lion's incubator is too expensive to be within the reach of any except those in the largest cities; the chicken incubator is not wholly reliable and supplies air which is too warm for the infant to breathe. From a considerable experience I have finally decided that I can achieve the best results from what is known as a basket incubator.

An ordinary clothes basket is lined with a quilt and the premature infant is immediately placed therein after it has received an anointing of sweet oil. It

is wrapped in absorbent cotton. This is covered with a blanket, and the blanket is kept in place by means of a roller bandage. Hot water bottles are placed beneath the child and a bath thermometer underneath the coverings. The nurse can carefully watch this thermometer and, by changing the water in the bottles or rubber bags, easily maintain a temperature almost continuously between 85° and 90° F. This temperature should never be allowed to fall below 85° F. A few degrees above that will do no harm. An equable temperature can be maintained without the assistance of an extra caretaker. This method of maintaining artificial heat is really superior to the use of an incubator, in that the child breathes the pure fresh air of a well ventilated room in which the temperature does not rise above 76° F.

The care of the child during the weeks of prematurity requires experience and training. The child's temperature should be taken regularly by the rectum, and if it fall considerably below normal the indication is to increase the heat from the water bottles.

The feeding is most important. Wherever it is possible mother's milk should be drawn from the breast and the temperature of the milk be maintained by immersing the bulb of the breast pump in a cup of warm water. At first it is best to dilute the mother's milk by an equal quantity of a solution of sugar of milk. Where mother's milk can not be maintained, the best formula for the beginning of the nourishment of the child would be milk one teaspoonful, sugar of milk one-fourth teaspoonful, lime water one teaspoonful, a pinch of salt, and boiled water enough to make ten teaspoonfuls. This may be fed to the infant in feedings of two or three drachms every two hours at first; gradually the amount of this mixture at each feeding should be increased until by the end of four days it has reached one ounce, and by the end of one week one and one-half ounces. After this time, if the food agrees with the infant, the proportion of milk should be one-eighth. By the end of three weeks the proportion may be raised to one-sixth; by the end of four weeks one-fourth. With the premature or feeble infant artificially fed, it need not be expected that the original weight will be regained by the end of four weeks. With the fully developed child the original weight is usually regained by the end of two weeks. It will be found frequently that the child must be fed by means of a medicine dropper. The most satisfactory device is a small rubber tubing covering the pointed end of an ordinary medicine dropper. The milk mixture is drawn into this dropper and forced gently into the back of the mouth. The presence of the soft tubing and a certain small amount of the mixture will commonly cause the infant to make sucking movements and the liquid will be swallowed. This method is successful when the child would not take the breast, the bottle, or swallow the liquid placed in the mouth from the teaspoon. Sometimes the infant will not swallow at all, or it will vomit everything taken into the stomach. In these cases the most satisfactory way of tiding the child over this danger period is by means of gavage. A small, soft catheter is passed through the nose, down the pharynx and into the stomach. The fluid flows in from a glass funnel. This nourishment will frequently be maintained when any other form of feeding would be unsuccessful. Very frequently I have been obliged to resort to the use of salt solution by the bowel; commonly the infant will retain two ounces.

A premature child should not be bathed for weeks; it should be rubbed with oil every few days. The cotton or diaper should be watched closely and frequently changed—on account of the urine or feces.

Cyanosis is frequent and often calls for mild stimulation with a few drops of brandy or whisky; sometimes it is relieved by food alone. Convulsions, in my experience, are common. They may arise from traumatism, hemorrhage or pressure upon the nerve centers, or they may be due simply to indigestion and the pressure of gases in the intestines. Often the convulsions are diminished in number or cease altogether in consequence of the use of an enema or the passage of a rubber catheter into the bowel to allow the gases to escape.

The temperature of the basket should be gradually reduced as the weeks pass

until a temperature of 76° F. has been reached.

The tendency is to make the food of young infants too concentrated. Once the digestion is upset, then arise difficulties in securing proper alimentation. When modified milk proves unsatisfactory peptonization is exceedingly helpful. Frequently whey dilated fifty per cent answers admirably for a time. This may be gradually increased in strength until there is no dilution.

The mortality in premature children is likely to run as high as fifty per cent. Frequently development is very tardy and often very unsatisfactory. In recent years among my premature children, one has marked strabismus, another spastic paralysis, another is an idiot. Sometimes one is led almost to regret the great efforts put forth to save the infant's life. The question arises, what class of infants among the premature or feeble demands the treatment outlined. When a child has a temperature per rectum considerably below normal that is an indication. When the child's weight is below four pounds we have another very positive indication. When the child shows redness of the skin, a diminished amount of subcutaneous fat, the presence of a good deal of lanugo, and nails which do not project beyond the finger tips, these are additional indications for special care.

413 Pillsbury Building.

[Written for the MEDICAL BRIEF.]

Concerning Diagnosis of Typhoid Fever—Case Reports.

BY E. L. CHAMBLISS, M. D.,
Internal Medicine in the University of Kansas.
Kansas City, Mo.

If diagnosis is always correct, typhoid fever, like many other diseases in modern times, is apparently becoming more prevalent and recovery more common. These facts are not alone true, but still more surprising is the fact that the so-called different types of this fever are becoming dangerously numerous.

The busy practitioner, particularly the consultant, frequently becomes astonished at the combination of symptoms which are being dubbed typhoid fever—and treated as such—and when recovery has occurred after ten days or two weeks it is taken for granted that a typical case of typhoid has been met with and that perhaps internal medication has influenced its course. Such impressions no doubt are very dangerous to the public and surely mislead the practitioner and cause him to create false ideas as to the possibilities in the handling of typhoid fever. I have had people say to me on occasions when typhoid fever was suspected, "Doctor, if this should be typhoid you can stop it, can't you;" or, "When my cousin had typhoid, the doctor just gave her some medicine which stopped the whole thing in a week."

The doctor who leaves such an impression is a menace to the profession; he is either ignorant or he is a fake. He is injuring himself more than his profession, however, and he either has not brains enough to realize this, or he does it for financial reasons.

I realize that we do have to contend with different types of this fever and that there may be abortive cases and mild cases, and, too, I realize that the condition of the victim, powers of resistance, vitality, age, and other influences which may direct the course of the disease, must be taken into consideration, but I am forced to believe that there are more cases of mistaken diagnosis than of anomaly. The fact is that diagnosis is the only hope for the future internist. The surgeon and the specialist are rapidly absorbing the whole field of treatment, and if we will stop for a moment and reflect we may readily see that after the specialist has had his just apportionment of cases, there will be left for the internist only a very limited number of diseases to treat; and if we reflect a little further, we find that it is a conceded fact that drugs do not influence many of the remaining maladies. In addition to these facts the surgical field is constantly offering so many new opportunities that a man does not get sufficient practical experience before he dives into some specialty which means treatment, and the diagnosis must be overlooked after all.

The result is poor surgery, incompetent specialists, and a gradual lowering of the standards of the profession.

Now, when we have the "Widal reaction" for diagnosis, we should use the pathologist in all cases of suspected typhoid fever, and should get a positive reaction about the seventh day of the fever. This positive reaction means the power of the blood or serum or other body fluids from a typhoid patient to cause a clumping of a culture of well defined typhoid bacilli. The clumping will occur rapidly and completely, according to the virulency of the typhoid condition.

This test is certainly a very useful aid in the diagnosis, but it is not infallible. There are a limited number of cases of other diseases which will give the positive reaction; this agglutinating power of the blood does exist in other conditions than typhoid, and we do not know what the diseases are. It seems that no particular disease or class of diseases will give this positive reaction more uniformly than another, but the fact remains that a small percentage of cases other than typhoid do give a clumping, and this fact must always be taken into consideration.

In the case of T. C., aged eight years, the following conditions were existent:

History: Four months previously, suffered with acute otitis media on right side, with considerable inflammation of antrum, extending over a period of two or three weeks, during which time there were numerous exacerbations of temperature and so much tenderness over the mastoid that the aurist seriously contemplated the necessity of radical surgical procedure, but the trouble cleared up perfectly in due time. Six weeks previous to illness in question, patient received a severe laceration of the left ear in an accident to the extent of an incision completely through the skin and cartilage which had not entirely healed, but which was discharging slightly from the sloughing cartilage.

Patient first complained of present illness August 29.

The temperature fluctuated very materially, during the first three or four days between 101° F. and 103.6° F., without reference to regularity, during which time there was intense frontal headache, severe nosebleeds and a general appearance of an oncoming attack of typhoid fever. Negative result in both diazo and Widal tests, with a leucocytosis of 21,500 by the third day and 16,800 on the fifth.

On September 3, the temperature was normal at nine A. M., rising to 101.2° F. in the afternoon. Painful micturition, negative diazo, with large quantities of pus in the urine; intense pain in the left side of the abdomen and in the nephritic region, marked edema of the eyes, and severe nosebleed.

On September 4, the seventh day of the illness, the pathologist reported a positive Widal reaction, with a negative diazo and considerable pus and epithelium in the urine, with a pure culture of the typhoid bacillus. Micturition was painful, and a diagnosis was made of pyelitis due to the typhoid bacillus, or nephrotyphoid fever. For several days the temperature was regular in its morning and afternoon exacerbations, reaching 103.8° F. in the afternoons, but on the seventh of September the temperature was normal at nine A. M. and 99.6° F. at eight P. M., and for several days following, normal all day.

Diagnosis in this case was based entirely on the Widal reaction, but the leucocytosis was the most interesting feature of the blood examination, particularly when we recall the statement of Cabot that "Almost all local inflammatory processes have leucocytosis, while typhoid (uncomplicated) does not." So that when the leucocytosis of 21,000 was reported in the above cases we went to work to find the cause, and up to this time there had been no symptom of any kidney affection. No kidney pain, not even a cloudy urine, absolutely nothing; but two days later blood was discovered in the urine and later pus in large quantities.

Inflammation of the kidney, or the pelvis of the kidney, was the cause of the leucocytosis and the typhoid bacillus the supposed cause of such inflammation. But again after a day or two of remission the temperature shot up and ran along for several days irregularly, then another remission.

It was suggested to the pathologist that possibly the colon bacillus was the cause of the pyelitis and that the culture of

typhoid bacillus was a mistake. He then obtained a pure culture of the bacillus coli communis, but also recognized another bacillus, so-called paracolon, which closely resembled the typhoid bacillus, and which he had evidently mistaken for the typhoid bacillus, possibly para typhoid. These remissions and examinations continued several weeks until the temperature finally reached 105.4° F., and remained between 104° F. and 105° F. for several days; dropping to normal suddenly. So this primary diagnosis was entirely wrong, due to the Widal reaction. I could report some very interesting facts concerning this case, but it is foreign to our subject.

Again, I have on several occasions met with delayed Widal reaction in typhoid fever.

Case of N. S., aged twelve years; onset and course well marked. After repeated examinations of blood the positive Widal reaction was only obtained at the middle of the third week; and in case of E. B., aged nine years, Widal reaction negative after fourteenth day of fever; did not try again, as clinical symptoms were very positive and the diazo test was positive all through attack, as it was also in case of N. S.

In typhoid the diazo reaction of Ehrlich is very constant, and I agree with the statement made by Filatov that "this test always succeeds in typhoid, beginning from the fourth to the sixth day of the disease, and is persistent during the whole course of the fever." The absence of the diazo reaction during the acme of the disease is against typhoid, and, "If the reaction once disappears it appears in cases of relapse, but this test proves negative as soon as the temperature depends on complications." However, the diazo test is existent with other diseases and particularly so with miliary tuberculosis, so that its clinical value for diagnostic purposes when considered alone is not so great as the Widal blood test. The test is of great value, however, if considered with the careful study of the clinical history and symptoms. Now in the case of pyelitis reported above daily urinary examinations always gave a negative diazo reaction, while the blood gave a positive Widal on two occasions.

My remarks are more particularly directed to the mild cases of typhoid and the so-called abortive cases, since these are most confusing to the practitioner. The abortive typhoid fever usually starts off violently and runs along a typical course rather severe, when, by the tenth day, it terminates suddenly, the temperature falls to normal and all the symptoms which have been well marked suddenly subside.

These cases should be managed with tact. Every effort should be made to verify the diagnosis and then to teach people what is meant by an abortive case of typhoid. That it is a type of typhoid which is terminated earlier than the usual type, and that "abortive," under these circumstances, does not mean "capable of being aborted" by treatment, but that it would be aborted if let alone.

In a case, T. D., male, aged thirty years, onset of attack was virulent and typical, both Widal and diazo appeared positive on the sixth day of fever. Maximum temperature on seventh, eighth and ninth days from 103.5° F. to 104.5° F., gradually descending to normal by twelfth day. He was kept in bed one week longer on restricted diet, when he felt so well that it was utterly impossible to keep him there longer. This was a typical case of abortive typhoid fever, but on the other hand, in the case of M. N., male, aged twenty-five years, I have to report a similar onset with a positive diazo on the fifth day. Maximum temperature on afternoon of seventh day 103.2° F., which receded to normal by ninth day. Widal negative. Temperature continued normal at maximum, but slightly subnormal in mornings until twenty-first day; I was about to let him up, when suddenly the temperature ran up to 103° F., and he ran a rather typical course for three weeks, suffering one slight hemorrhage and recovering at the fourth week. During the intermission the tongue did not clear up and the patient did not appear to have recovered, and it was with fear and trembling that I was about to let him up when the relapse occurred. The

Widal appeared positive on the eighth day of the relapse.

I merely report these cases to bring to notice such atypical cases and to show the necessity of verifying our diagnosis in all cases by all possible means. Hare has reported such a course as that outlined in last case.

I have occasionally found a case, apparently not very sick, with a temperature of 99° F., in my office in the afternoon, and which persisted in reporting daily with a history of feeling quite well in the morning. I would search carefully for pulmonary tuberculosis and every other possible affection for a cause for the temperature, when after five or six days I succeeded in getting a positive Widal and diazo reaction, I have decided on a typhoid diagnosis. These cases are hard to treat, but it is extremely important to give them every care and attention, for such complications as hemorrhage, perforation are just as likely to occur as if the temperature were running high and the Peyer's patches and solitary follicles were involved. On the other hand the para-typhoid of Schott Muller "may run a course just the same as typhoid without any lesions in the intestinal glands, and under such circumstances as above described the danger to the patient would be very slight if he should not remain in bed."

Blood examinations then surely render diagnosis much more positive and should be resorted to. A differential clinical diagnosis is very essential. Symptomatology is of vast importance in the diagnosis of typhoid fever, and diagnosis is the whole thing. The internist is rapidly turning himself out of business so far as the administration of drugs is concerned and diagnosis must be his hobby. Diagnosis is the most important feature in the practice of medicine. Diagnosis *is* the practice of medicine. No drug or lot of drugs can influence the course of typhoid fever. There is no specific. There is absolutely nothing which will abort, retard or end a case of typhoid fever in its prescribed course. The serum treatment will likely be the light which is to shine in this direction. Symptomatic treatment and careful nursing is the whole thing, but careful nursing means more than is usually understood by that phrase. The principal duty of the nurse is the very one which most nurses neglect—watchfulness for complications and ability to recognize them in time to overcome them. We should instruct the nurse at each visit what to expect, what to look for, and what to do if such complications should appear.

The anomalous cases of typhoid fever are the puzzling ones, not only in the diagnosis but also in the prognosis of the course. We must remember the case in which the temperature drops to nearly normal and other prominent symptoms subside earlier than expected, and after too much indulgence in solid food ends fatally with collapse, or perforation. In these cases the Widal test is valuable in verifying the diagnosis. We might feel, without it, that perhaps we were wrong, and feeling so become negligent in our cautioning to the serious detriment of the patient. Again I believe the doctor is decidedly too prone to credit such a sudden subsidence of active symptoms to the use of certain drugs which the patient happens to be taking at the time of such changes. There is no drug which will shorten the course of typhoid fever, which is now known. Variation from the usual typical course is rather the rule than the exception, and in many instances it is the complication which causes the variation.

The early recognition of the complication is therefore of the utmost importance. While there is no drug which will affect the action of the typhoid bacillus, there are drugs with which we can combat the effects of the action of the other bacilli, and these, among them bacillus coli communis, should be handled with intelligence and care.

Rialto Building.

After sixty years of professional work and eyes dimmed with age, I have felt like giving up medical literature, but the BRIEF's caustic hits of fads, and charlatanism in general, acts as a stimulating collyrium. Send the BRIEF. Inclosed find the *quid pro quo*.—H. O. TALLMADGE, M. D., Keeseville, N. Y.

[Written for the MEDICAL BRIEF.]

Early Recognition of Tuberculosis.

BY SIDNEY J. MEYERS, M. D.,
Professor Medicine and Clinical Medicine,
Louisville Medical College, Etc.
Louisville, Ky.

Probably no subject at the present time is occupying the minds of the general practitioner as well as the laity as is tuberculosis. Well-defined cases of this disease are easily recognized by the practitioner, or even diagnosed by the family before the patient is brought to the physician for treatment.

It should be our aim not only for the progress of medicine, but for the good of the patient, to make a diagnosis of tuberculosis at the earliest possible moment, for with early diagnosis we can expect to get some benefit from the treatment instituted. A great many cases present themselves simulating to a marked degree malarial infection on the one hand, and rheumatic intoxication on the other. The physician as a rule is lax in his methods of diagnosis, and these patients are sent from our offices with a snap diagnosis of one or both mentioned conditions. The early recognition of this condition is extremely difficult, but when one is suspicious that there may be a tubercular involvement, repeated examinations should be made, and I am satisfied that after many repeated careful investigations that some evidence of this infectious disease may be made manifest.

Probably one of the earliest diagnostic points is the finding in the lung of some small area wherein we find a râle. This area may be very small, upon percussion there may be absolutely no dullness, and at times, upon auscultation, the breathing will be perfectly normal. Whenever râles do occur within any given area in the chest walls, our suspicions should be aroused.

Accompanying this condition we would have a slight deviation from the normal in the temperature range. We would also have a corresponding acceleration of the pulse, and the same ratio maintained in the respiratory movement. Repeated examinations of the sputum should be made. I say repeated advisedly, because often as many as twenty or twenty-five bacteriological examinations have failed to disclose the tubercle bacilli, when upon the very next occasion we have found the secretions swarming with germs. It is important here to suggest to the patient that sputum be given for examination, and not secretion from the naso-pharynx, as so often provided the examining physician.

Another sign that should not be overlooked is that of emaciation. This loss of weight need not be very marked, yet any loss combined with the above symptoms should make our picture rather clear. Rheumatism may be ruled out after a sufficient time has elapsed, and after a thorough anti-rheumatic treatment has been instituted. Malaria in its many forms which may be confounded as above stated, should certainly be differentiated quickly and scientifically by the isolation in the blood of the plasmodium. Should cases giving the symptoms described not yield to either one of the above investigations, then we should certainly consider tuberculosis as the causation of this symptom complex.

If we are able to recognize tuberculosis in this stage, in the stage of invasion practically, we may benefit the patient to the greatest possible degree, but if we allow this condition of circumscribed râles, slight elevation of temperature, only a few more than normal respiratory movements, acceleration of pulse, and emaciation to escape us, then we have lost the golden opportunity of relieving this very distressing and prevalent condition. I may be criticised for being suspicious of tuberculosis in all cases simulating the condition described, and yet a diagnosis need not be made until we are thoroughly satisfied regarding the existing conditions.

I have purposely avoided giving cough as a symptom of tuberculosis, because I believe that this has less to do with the making of the diagnosis than any of the objective or subjective signs attributed to this disease, coming, as it does, in so many conditions, and from so many different causes.

What shall we do in the time that elapses from the presentation of the patient until the diagnosis is made? Shall we alarm the patient by our suspicions,

or shall we let him go on and jeopardize those who are about him? We must all appreciate the infectiousness of this disease, and it is therefore our duty not always to inform the patient himself, but certainly those who are near or associated with him. The same precautions should be taken in preventing the spread of the disease at this especial time as is taken even in the most virulent cases. The patient should be treated with placebos just as we palliate those afflicted with syphilis between the time of the primary sore and the secondary eruption.

What shall we do when the diagnosis is made? The first and utmost requisite is to gain the confidence of the patient, and this can only be gained by positive and undoubted statements from the physician himself, and these in turn can only be made after we have satisfied ourselves that tuberculosis is the disease. Much depends upon the social and financial condition of the patient as to the character of advice that he be given. I believe little is accomplished from treatment by drugs. Treatment by regime and climate is the only thing that offers any hope to the sufferer. The patient should be informed as to his liability of infecting others. He should be impressed with the gravity of the condition, and should be told of the effect that climate and environment have upon the disease, and should be advised to find himself a suitable locality. I notice that most patients in this incipient condition will hesitate before giving up their business, or before allowing their families to be taken away from them, and yet we should be master of the situation, and insist that now is the time or never.

Should circumstances prevent the following of our advice, we must then battle with the condition at home, and insist upon the open air treatment.

My only hope in writing this short article is to insist upon an early diagnosis of this disease, upon being suspicious of every case presenting itself to us with the symptoms described, insisting upon the newer methods of treatment in tuberculosis, and the discarding of medicines which hold out hope, but in reality mean absolutely nothing to the patient.

1061 Second Avenue.

[Written for the MEDICAL BRIEF.]

Syphilis of the Ear.

CHARLES J. LIDIKAY, M. D.,

Clinical Professor of Ophthalmology in the Medical Department of the University of Kansas.
Kansas City, Kan.

The percentage of cases of ear affections due to syphilis is much smaller than of eye cases from the same cause.

A primary infection of the ear is very rare, only a few cases being recorded. We may have a chancre on any part of the external ear or at the mouth of the eustachian tube, the former being caused by direct contact, and the latter, usually, by infected instruments, particularly the eustachian catheter.

The majority of syphilitic ear cases occur in the secondary and tertiary stages, and any part of the external ear or canal may be affected; the external canal may be invaded by condylomata. These in turn may cause suppuration, involvement of neighboring glands, and finally deafness. This canal may also be affected by diffuse inflammation, with little swelling and characterized by severe pain and profuse discharge.

In syphilis of the middle ear the symptoms are very similar to those of other ear conditions not syphilitic. We may find acute catarrhal inflammation, purulent inflammation, or neuralgia of the middle ear.

In infants suffering from syphilitic disease of the nose and throat, we frequently find affections of the middle ear. The bones of the middle ear are probably more frequently affected when the trouble is syphilitic. There are no characteristic symptoms by which we can differentiate between specific and non-specific forms of these diseases. Of course, signs of specific lesions in other parts of the body would aid us in making a diagnosis. In the offspring of syphilitic parents we sometimes observe great, if not total, loss of hearing in a very short time, due to syphilis of the middle ear. This is most common in females. The pathological changes causing the symptoms are unknown, although several theories have been advanced. It is not a fatal disease,

hence there have been but few opportunities for *post-mortem* investigation. In most cases that have been examined the mucous membrane lining the middle ear cavities have been found hyperemic, and in some cases involvement of the periosteum and bone.

The onset of this disease is sudden. Pain is rarely present. Vertigo, headache and staggering gait are the most prominent symptoms.

Treatment of this condition is of no avail as a rule, but we should always give mercury and the iodides to the point of toleration. The treatment of the inflammatory conditions should be local and internal. Internally, mercury and the iodides; locally, the condition of the nose and throat should be looked after and placed in the best possible state of health. Before suppuration takes place I make local applications of cocaine to the internal opening of the eustachian tube and surrounding tissues for the purpose of shrinking them and relieving the congestion of the parts. This shrinkage of the tissues permits the entrance of air into the eustachian tube by means of the Politzer bag, and permits drainage of serous or other discharge from the ear. I then paint the tube and surrounding tissues with a solution of silver nitrate, ten grains to the ounce. If the case has advanced to the suppurative stage, my first object is free drainage. This, in my experience, is best acomplished by keeping the ear thoroughly flushed out with warm water. My rule is to order a fountain syringe hung two or three feet above the patient's head and have the warm water run through the affected ear every two to four hours, or as often as there is discomfort. There are always plugs of pus and shreds of mucus and debris that a patient can not remove in any other way. Small ear syringes are not successful in accomplishing this result. I am aware that some authorities advise the insertion of a strip of gauze up to the drum for purposes of drainage, but in the majority of cases I find if the ear is dressed but once a day by this method we usually find an ear full of pus, and that the patient has suffered more or less pain.

After two to four days of the hot-water treatment I find the discharge much thinner and less in amount. Pain and swelling are lessened, and we can then begin our antiseptic treatment. After the ear is thoroughly cleansed with a suitable antiseptic preparation, I thoroughly dry the canal with pledgets of cotton, and dust with an antiseptic powder, after which I apply a strip of gauze.

This dressing is repeated daily and then at less frequent intervals until the ear is well. If there should be ulcers or granulations, they can be touched with silver nitrate crystals or strong solution.

Portsmouth Building.

[Written for the MEDICAL BRIEF.]

Hysterical Anesthesia.

BY B. T. ZIMMERMAN, M. D.,

Professor of the Principles and Practice of Medicine, Neurology and Clinical Medicine in the Louisville Medical College. Louisville, Ky.

Of all the sensory stigmata of hysteria the anesthesias are the most important and most interesting. This is due to the fact of the frequent occurrence of anesthesias and also to their objective nature. Hyperesthesia and parasthesia being signs which are for the most part subjective, and hence are not as valuable from the standpoint of diagnosis. The anesthesias affect both general and special sensation. The anesthesias of general sensation are usually the hemianesthesias, the geometric anesthesias and the irregular anesthesias. The hemianesthesia is the most frequent, the entire side of the body being affected, the anesthesias extending to the median line, both anteriorly and posteriorly, and there terminating abruptly, as a rule. Not infrequently we find special sensation diminished also on the anesthetic side, as, for instance, diminution of vision, or impairment of hearing.

The next in frequency is the geometric form in which an entire limb or portion of a limb is anesthetic, giving rise to the so-called "glove" and "stocking" anesthesia, etc. The rarest form is that in which

we find the anesthesia occurring in islets irregularly distributed over the surface of the body. These anesthesias are quite common in the entire paroxysmal state of hysterical nature, and a careful examination of the subjects of this type of the disease will be rewarded by the discovery of one of these forms of anesthesia.

This anesthesia is functional, and not organic; it is due to mental inhibition, and usually accompanied by other evidences of hysteria relative to the psychic sufferer.

It is very necessary that we be able to differentiate hysterical anesthesia from one due to organic lesions; there are certain evidences found in the former which are not seen in the latter type. The first and most singular of these is that the patient is unaware of the anesthesia until the condition is called to his attention by the examining physician. The entire side of the body may be anesthetic to pain, and yet the patient is apparently unconscious of the existence of this anesthesia. This, of course, is not true of anesthesia due to organic disease.

This anesthesia does not correspond with the anatomical distribution of the nerves. It is rather a physiological than an anatomical anesthesia; the line of demarcation between the anesthetic and the non-anesthetic is sharp in this respect; it differs from the anesthesia due to organic disease of the nervous system.

The third point is the changeability of the anesthesia and the anesthetic area can, by suggestion or by hysterical attack, or by the electrical current, become sensitive, and often is accompanied by the appearance of an anesthetic area on the opposite portion of the body.

It is important that the physician in searching for this form of anesthesia should not suggest the possibility of its presence to the patient, for the mere suggestion may be sufficient to cause an anesthesia. The examination then should be made without the patient's knowledge of the purpose thereof. Usually while the patient is conversing with the physician or an attendant, the mind being diverted from the process of examination, the best opportunity is offered. Not alone is general sensation affected, but the special sensation as well. The commonest form of anesthesia of special sensation is that of vision. Total blindness is uncommon; usually appears suddenly and disappears very readily. Very frequently, however, we find a contraction of the visual field. This may be very pronounced without causing the patient the least inconvenience. The contraction of the visual field from organic disease sufficient to produce marked interference with vision would cause no subjective symptoms in a case of hysterical contraction of equal degree.

Anesthesia of the auditory nerve is also met with; sometimes total deafness is observed, although this is extremely rare. The trouble in the special anesthesias seems to be central. The olfactory and gustatory nerves are also involved, giving rise to perversion of the senses of smell and of taste. These perversions do not cause disagreeable sensations, but rather pleasant ones, so that odors and flavors that are disagreeabl the attendants may be entirely agreeable to the patient himself.

The subject of hysterical anesthesia often becomes one of very great importance to the general practitioner because of its constancy in the severe forms of hysteria, and because of its value as a diagnostic aid.

405 Chestnut Street.

[Written for the MEDICAL BRIEF.]

Ligatureless Method of Vaginal Hysterectomy.

BY H. HUGH HELBING, M. D.,

Professor of Gynecology and Abdominal Surgery in the American Medical College.
St. Louis, Mo.

The operation differs from the ordinary vaginal hysterectomy in that the uterus is peeled out, as it were, pushing off the anastomotic artery, and thereby avoiding severance of the uterine or the anastomotic artery.

The operation is performed with the patient in the dorsal position, cervix being grasped with volsellum forceps; incisions are made in the cervix beginning about one inch distant from the cervical outlet anteriorly first, and then poste-

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The operation is performed with the patient in the dorsal position, cervix being grasped with volsellum forceps; incisions are made in the cervix beginning about one inch distant from the cervical outlet anteriorly first, and then poste-

riorly, and with fingers and spud working up along the anterior and posterior wall of the cervix until we reach a point at about the junction of the cervix with the body, where we will enter the pelvic cavity; first, anteriorly, then introducing the fingers and grasping the body of the uterus, it is tipped forward and pulled down into the vaginal canal. The index finger is introduced beyond the broad ligament, and with scissors incisions are made just outside of the anastomotic artery, or between this artery and the body of the uterus, until we have severed the connection of the broad ligament to the uterus. We then operate likewise upon the opposite side.

Should it be necessary to remove the ovaries as well as the uterus, after introducing the fingers in the peritoneal cavity, through the opening in the vesico-uterine ligament, we bring down the ovary and ligate the pedicle produced by pulling down the ovary, removing one or both ovaries by this method.

We find by operating in this manner that only small branches of the anastomotic artery are severed and require only grasping with the hemostat. That is, it is not necessary to use ligatures to stop the bleeding, but merely grasping these small vessels with hemostats and twisting them will stop the bleeding; thus we eliminate the element of shock from hemorrhage, and the patient recovers speedily.

The only distress produced is that caused from the anesthesia. Most patients will recover and be able to leave the bed in ten days to two weeks and will be out of the hospital in three weeks. This is quite a contrast to those patients who are operated by the abdominal route, and quite an improvement over the method of operating and dividing the uterine or anastomotic artery,

In cases where this artery is severed there is always danger of secondary hemorrhage, while in the method described above there is no danger of such a complication.

1802 North Kingshighway.

[Written for the MEDICAL BRIEF.]

The Early Diagnosis and Symptoms of Consumption — Arguments Drawn Therefrom for the Subcutaneous Injections of Oil.

BY THOS. BASSETT KEYES, M. D.,
Chicago, Ill.

The diagnosis of consumption should be based upon its symptoms, and not from tests as to the reaction of the system, for that is sometimes deceivable, while the symptoms plainly point out the course of treatment and ways of living which the patient should adopt. An old tubercular lesion may remain dormant and not cause the patient the least annoyance, or interfere with his health, providing he is living a proper life as to matters of food; indeed, by this means alone, through some change in the life of a tubercular person, as an occupation which has increased his appetite, or through change of diet, the disease has been cured.

While the tuberculin test has been usually advocated only in the early stage of the disease, where the symptoms are obscure, I do not remember it, for the reason that it very often produces in these cases more than a slight fever, and, in addition, may produce chills and general malaise and aggravation of the symptoms, which, lasting for some days, weakens the patient, takes away his scanty appetite, so that from the test he has often lost in weight and, as a consequence of all the conditions enumerated, has lessened, rather than strengthened, his chance of recovery.

That early diagnosis of consumption is so important has been the excuse of the stanchest advocates of the tuberculin test, but I take it that the pretubercular symptoms, which should cause alarm, are so prominent that they can not fail to be recognized, and were treatment began at this time it would be more as a preventive measure. But it is only too often that the consumptive patient does not seek aid in the early stage, or his physician, recognizing the disease, has spared him of the knowledge, sometimes the physician himself being at fault, if he has allowed the disease to advance. Though understanding human nature, we

know that some of these patients do not follow the advice in the manner in which they should; again, how many have made a proper study of this disease, and are able to plan a diet disguising the large amounts of butter and fats, so as to be relished by the patient, and which are so essential to the cure of this disease, together with other articles of diet which, by their mechanical action, aid in the digestion of these fats?

In the diagnosis of early tuberculosis we must first consider the following points as aids:

1. The appearance of phosphate in the urine.

Phosphatic absorption and fat assimilation are closely connected, so much so that when hogs are fed upon a milk diet, in which all fats are eliminated, so far as practicable, phosphaturia develops. The consumptive patient, passing large amounts of phosphates in his urine, is cured of these symptoms by the subcutaneous injections of oil, and it is evident that the assimilation of the oil produces conditions for the greater absorption and assimilation of the phosphatic salts.

2. Loss of appetite, some indigestion, and a dislike for fatty foods, anorexia, and nausea, with progressive loss of weight, inequality and dilatation of the pupil.

Such symptoms call for outdoor life and forced diet.

3. Sleep sweats, general relaxation of the system, and a tendency to sweat from slight exertion, with a rise of temperature in the afternoon, then morning expectoration and cough, perhaps pain in the affected lungs, or in the supraorbital region and neck, and sometimes hemorrhage.

These symptoms call for subcutaneous injections of oil, for by their use we strengthen the patient by building up nutrition, and we furnish material for maintaining the normal heat of the body. Nature, being thus supplied, does not seek to conserve and save her forces and fat tissues from too rapid oxidation, by cooling the body with perspiration at the expense of the vitality and force of the body. On the contrary, the substance for oxidation and care of diseased tissues is furnished by the oil injected, as well as the substance for furnishing force and vitality to the body.

4. The period of invasion of the germ is commonly marked by symptoms of a chronic bronchitis, without pulmonary signs.

The symptoms which we have enumerated are premonitory, after deposit of the germs; when these are being thrown off, with consequent symptoms, the diagnosis is easy, but in the treatment of this disease we should not wait for advanced symptoms before beginning the treatment. The symptoms of cough advance with the amount and extent of inflammation of the lung tissue, and the sensitiveness of the throat, and the amount of anemic, blood pressure, and cardiac disturbances. When all of these symptoms have arrived, coupled with loss of weight, it is not necessary to confirm our diagnosis by finding of the germ. The general physical appearance of our patient, together with the symptoms, enable us to base our diagnosis.

Without entering upon the differential signs of this disease, we may mention signs of the diseases which have been said to be often confounded with tuberculosis, and from which differential symptoms should be kept in mind.

Chronic bronchitis, chronic streptococcic, or influenzal pneumonia, and syphilis of the lung, are among the inflammatory diseases of the lung which bear closest resemblance to tuberculosis. But when symptoms of wasting disease of a chronic type are present, with or without severe pulmonary symptoms, they call for, as the principal part of their treatment, nutrition, and this is best given by subcutaneous injections of oil. The same as to treatment can be said of these other diseases which may be mentioned as having symptoms similar to those of early tuberculosis, such as pernicious anemia, leukemia and pseudo-leukemia, but which require differential diagnosis; not on account of treatment so much as for the satisfaction of the patient and physician. As the symptoms of tuberculosis advance, all of the premonitory symptoms increase in severity and give rise to certain signs, characteristic of pathological conditions, which varies according to the form of disease and the resistance of the body,

depending upon the manner of the patient's living. The morning cough increases on account of the larger amount of inflammatory matter cast off from the lungs. The germ is now usually easy to find.

The symptoms of tuberculosis are now so prominent that they should be used to mark the stage of the disease rather than its diagnosis. The advanced pathological conditions, such as extensive inflamed bronchial tubes and lung tissue, with its crepitant and various râles, the consolidation and formation of fibrous tissue, with contraction and depression of the chest walls, with lack of cell and bronchial breathing, with various changes in the percussion note; the formation of cavities, with their various resonance, whistling, and râles, are all too evident of their pathological conditions to require description of symptoms here, for the reason that they indicate the stage of the disease, rather than its early diagnosis.

The thin, emaciated patient, with advanced disease, would never have suffered from the severe symptoms had subcutaneous injections of oil been instituted early in the disease. But there is still hope for those advanced in the disease, for by this method of treatment I have had patients recover from well-formed cavities in the third stage of the disease, and resume their occupation after six months' treatment, when they had previously been unable to work for one or two years, and, as we shall see in our lecture on pathology, subcutaneous injections meet every symptom and indication for the cure of the disease and all its pathological conditions.

[Written for the MEDICAL BRIEF.]

Medical Wonders and Medical Blunders—A Story of Facts.

BY M. J. RODERMUND, M. D.,
Milwaukee, Wis.

CHAPTER XXIII.

Not having time to write the regular article intended for this issue, I snatch a few moments time to call attention to a subject that ought to be of interest to physicians during the coming months. About two months ago, in conversation with a few gentlemen, I called attention to present existing atmospheric conditions, and that if these conditions continue for several months we would hear of small-pox breaking out in this State, in certain territories, before December 1. I also stated that we would hear of small-pox first along the coasts of the Great Lakes, and that it would break out among the robust and hard-working men first. In the past two weeks several cases of small-pox have appeared along the shores of Lake Michigan and Lake Superior. As usual, the public are greatly frightened, and there will be the usual harvest of vaccination and quarantine enforced by the physicians. Near Lake Superior nine cases of small-pox broke out in a camp in three days. Where these nine strong men caught the small-pox, of course, is not mentioned, but it is strongly mentioned that a strict quarantine has been established, combined with vaccination, to prevent the spread of the disease.

If the present atmospheric conditions keep up we will find that small-pox will spread as usual, and that no health officer or doctor, by the present methods or any other method (excepting one), will prevent a single case of small-pox, but when the conditions that are the exciting causes change, the epidemic disappears. Why is this always the case? If the epidemic disappears on account of the methods adopted and enforced by the health board, then why would it not be the logical conclusion to blame the health officers to allow these epidemics to come back at their usual intervals? If they can stop an epidemic when it exists, why would it not be much easier for them to prevent an epidemic? Does not their own logic condemn them? To illustrate the principle I refer to more strongly, I will here describe the incident that created such a sensation all over the United States in January, 1901, and will clearly show that I knew what I was about when I selected this particular case. This lady had come to visit friends at Appleton from Shawano, about forty miles distant, and there had been no case of small-pox known within thirty to fifty miles of Appleton up to that time.

The articles published throughout the United States by the newspapers and magazines at the time, contained some truth,

but the whole truth has never been published. If the readers will pardon me for taking up space in the BRIEF at this late date, I will give them the facts just as they occurred, and nothing but the facts, and if it does not set you a-thinking, the rusty gearing of your cerebrum is beyond motion or activity.

On Monday, January 21, 1901, about 11:30 A. M., I entered the residence of Mr. F., where Miss Stark was confined and quarantined with small-pox. As I entered the house Mr. F. jumped up from his chair and said: "We are not allowed to let any one enter this house." "Never mind," I said, "I am not anybody, so perhaps you have made no mistake." I then stated that I came to see the small-pox patient. "There she is," he said, pointing towards a young woman in a far corner of the room. Mrs. F. sat by the window sewing, while a child about two years old ran about the room. There were, therefore, four persons in the same room. "Are you not afraid of taking the small-pox from the girl?" I asked. "No," replied the mother; "we are not afraid." "But the doctors say that this disease is very contagious, and are they not very careless and negligent in not keeping this patient away from the rest of the family? This looks as though the physicians do not care if the disease does spread, or that they do not believe it is contagious. In either case they would be rascals. This is a genuine case of small-pox, just see the large pustules, full of pus; of course," I added, "I know you can't take the disease from this young lady."

Then to show them that this was true, I broke open a large number, perhaps a hundred, of the large pustules on her face and arms, took the pus out of them and smeared it over my hands, face, beard and clothes, and, at the same time, remarked that I would now go home, only two blocks distant, to dinner. I made no mention of the affair to my family during the two hours I remained with them. From my home I went directly to my office without telling anyone. The first person who came in the office was an old friend, Rev. T., who has a parish at North Milwaukee. We shook hands heartily; in fact, I had entirely forgotten that I was covered with small-pox virus. I presented him with one of my books and, according to our scientific knowledge, I must have covered the book and gentleman with small-pox germs, and he, in return, must have exposed many people in Appleton, those he met on the train and, finally, his whole congregation. The germs on the book, I presume, are still enjoying themselves in the spiritual home of the reverend gentleman.

During the same afternoon I touched and handled the faces of several persons in my office, while treating their eyes, fitting glasses, etc. From four to six, and from eight to ten o'clock the same afternoon, I was at the Business Men's Club, where I mingled and played cards with the members. At the club in the evening the conversation drifted to the newspaper article that evening containing the notice of a case of small-pox being in the city, which, of course, was the same case I had visited in the morning. After discussing the subject for awhile, one of them asked me if I would visit a small-pox patient and then go home to my family. I quietly remarked that I would just as soon do it as visit a patient with a common cold. Finally, Mr. D., cashier in one of the banks at Appleton, remarked rather sarcastically, "Now, doctor, what's the use of talking such nonsense; you would no more think of visiting a small-pox patient and then go home with your family than you would go home and shoot one of your children. You are too sensible a man for that!"

The reader can imagine the state of my mind at that time, as none of them had an inkling that I was at that very time covered with small-pox pus, and that the cards we were playing with were being loaded with this poison. Still, I never once mentioned my visit to them. Further, I would never have gone to the club rooms if I had had the least idea that my actions would ever become known, as I knew the sentiment of these gentlemen, and I also had too much respect for them and myself to impose upon their feelings, even if I did know their belief was a foolish superstition. I have done similar acts dozens of times during the past fifteen years and have, in each instance, watched the results, and not the

slightest harm has ever been done to anyone.

To return to our subject. After leaving the club rooms that evening I went home, slept with my family, and the next morning took the train to Green Bay. I took breakfast at Green Bay, and then went to the store of Mr. M., who had engaged me to fit glasses for his customers on that day. I handled the faces of twenty-seven persons during the day, besides those I exposed on the streets and in the train on my way home. The next morning (Wednesday) when I arrived at my office I found several reporters waiting to ascertain if the report was true that I had visited the small-pox patient, and had smeared myself with pus. In the beginning I neither affirmed nor denied the accusation, because I did not want it known, but upon inquiry I learned that one of the neighbors had seen me come out of the house and had asked the health officer if the family had changed doctors, as she had seen Dr. Rodermund come out of the house on Monday. Consequently, there was nothing for me to do save tell the exact truth, in such a way as to mislead the public and to discredit me. Among other things they stated that I had personally bragged of what I had done, when they knew that I never intended it to become known to the world until the people were ready to consider such revolutionary truths for their own benefit.

I was allowed my freedom about the city all day Wednesday, but on Thursday, the fourth day, I was quarantined, and a guard of policemen stationed around the house. The people had been so aroused by the health officer, doctors, city officials, and the newspapers, that one of the policemen told me that it was a good thing I was protected by a strong guard, otherwise my life would be in danger. Saturday evening I broke quarantine, in spite of five policemen and the fact that the Mayor of Appleton, in a public meeting, stated that they had Dr. Rodermund bottled up as effectually as they had Cervera at San Diego; drove forty miles to Waupaca, took the train to Chicago, and had breakfast at the Great Northern. From Chicago I went to Terre Haute, Ind., and on my way back home I traveled and stopped off a half day or so at five cities in Illinois, but on arriving at Milwaukee I was arrested and held for four days in the pest house. This is, in brief, an outline of the whole episode which created such a sensation.

The policemen, doctors and health officers in the States of Wisconsin, Indiana and Illinois tried in every way, shape and manner, to trace a case of small-pox, but with no avail. Even after I had exposed five hundred thousand people and rubbed my pus-covered hands over thirty-seven faces, they could find nothing against me. Yes, if I had rubbed the pus of small-pox patients upon the naked body of every citizen in the United States, not a single case of small-pox could have developed. This is an absolute natural truth that can never be overthrown. My reason for this I have explained in previous articles the past few months in the BRIEF. Why is it that not a single physician of the forty thousand readers of the BRIEF will discuss or defend their present nonsensical, inhuman and brutal methods? I think there is only one point in this article, and it is this: If any of the thirty-seven people or myself would have taken small-pox it would certainly have been by infection (direct contact) and not contagion. If the disease can not be spread by infection there surely can be no danger in going into a room where a small-pox patient lies. The cause of small-pox itself can only be better proof, and this has been explained in former chapters.

(To be continued.)

330 Harmon Street.

[Written for the MEDICAL BRIEF.]

The Influence of Trifles.

BY S. E. GIBBS, M. D.,

New York City.

"For want of a nail the shoe was lost,
For want of a shoe the horse was lost,
For want of a horse the rider was lost,
For want of a rider the battle was lost."

And all for the want of such a *trifle* as a small nail, worth about half a cent.

But, of course, the *other side won*, and so it frequently happens in the practice of medicine.

How often do we find ourselves supplanted by some other doctor (perhaps in our estimation an ignoramus), and thus

lose a good family of patients whom we have for years felt that we owned, body, soul and pocketbook, for want of such trifles as a little tact, a little foresight, a word inaptly spoken, a wink, or a smile, just at the wrong time, or a sober look when we were expected to smile, perhaps at a silly joke, the point of which we did not discern till the next week. And we sit in our office and wonder why the family changed doctors, just when we were trying so hard to pay our last year's taxes.

I once met in consultation a most estimable physician, a man who had probably forgotten more about medicine than I ever knew. The patient was a wealthy old gentleman suffering from the effects of a cerebral hemorrhage, and was unconscious. Weeping friends surrounded the bed, expecting every moment to have the burden of his vast wealth saddled upon their shoulders. While waiting for the doctor's arrival some friends had administered a spoonful of brandy to the patient. My conferee detected the odor on the patient's breath, glanced at the bottle on the table, winked at me, and said: "That accounts for it." Instantly the anxious friends were aroused. "He never drinks," they indignantly exclaimed in chorus, and the consultant's prestige vanished like the morning mist on the mountain top. They never paid his fee.

Some years ago I visited a patient and received the congratulations of the entire family on his rapid recovery. They were *so grateful*, informed me that I had saved his life, and all that sort of thing which we so often hear. On passing through the hall I noticed a small, but exceedingly beautiful, painting, and remarked on its beauty. Fatal remark! All my skillful efforts were forgotten, and on sending my bill, some months later, I was politely informed by letter that "they were able to pay their bills," and that "it was entirely unnecessary for me to take an *inventory* of their household goods. My *professional services only* had been required." This was ten years ago, and the bill is still on my books. So it cost me just fifty-six dollars to look at that beautiful picture on the wall. It wasn't worth it. I can see better ones at the museum any day for a ten-cent car fare.

An elderly spinster once requested the loan of some good book on anatomy. Foolishly, I handed out Gray's, remarking that it was the best I possessed. She found some plates toward the end of the book which displeased her, and indignantly returned my book with the brief remark that "she did not care to be gratuitously insulted." Now, "Gray's Anatomy" contains nearly one thousand pages. She evidently saw *one* of them. She was a good-paying patient, but now another doctor gets her cash.

I meet an old lady, a stranger, at the church social, who kindly tells me of her ailments, her husband's faults, the trouble she has with her servants, and how many of her grandchildren have had measles and mumps, and when, and how long they lasted; also informs me that she has a bunion on her left foot and a soft corn on her right. Of course, I deeply sympathize with her, but offer no advice. I afterwards learn that "she likes me *personally*, but would not care to employ a doctor who takes so little interest in his patients."

A patient informs me that he changed doctors because his family physician now drives a pair of horses, instead of one horse, as formerly, "which is, of course, a very heavy expense, and *he must make the money out of his patients somehow.*" And still another tells me that Dr. Blank can't be *very sucoessful*, because he keeps no horse and carriage, and lives in a flat.

An exceedingly intelligent friend confidentially advises me to remove my bookcase with its well-filled shelves from my office, because doctors are supposed to know all about medicine without having to consult their books after they have graduated, and having so many books in sight has a bad effect on patients. And still another tells me that he was in Dr. Knumskull's office, and "there wasn't a book in sight, so *he can't know much.*"

There comes yet another who informs me that my rival across the street has the finest display of surgical instruments that he ever saw, in a glass case. So he must be a great surgeon and have a fine practice.

And a lady patient says: "Oh, doctor! Why don't you cover up those horrible instruments. They make me feel faint; they are so suggestive."

Another patient surprises me in the act of reading the morning paper, and says she always thought doctors were too busy to read the papers. And an hour later another patient asks me if I have heard of the terrible railway accident, six persons killed, etc., and on my replying that I had not heard of it, raises her eyebrows, also the corners of her nose, and says she thought all doctors would read the papers and take an interest in such things, "a professional interest, you know." And I am afterwards told by a mutual friend that the lady in question does not consider me a very *well-informed* man, for a doctor.

A smile! What a trifling act in itself, but how much it sometimes means. I once inadvertently surprised the husband of my patient in the act of kissing the nurse in the hall; and my involuntary smile cost me the good will of a rich young man, and on the flimsy plea of his wife's wish to try homeopathy for a while, I was discarded, and the lesson impressed upon me that blindness sometimes has its advantages, while deafness almost invariably has, and the complete control of the risible muscles is invaluable.

On one occasion, while impatiently waiting in the parlor for the patient's appearance, I gently kicked a pet spaniel which was gnawing my new trousers below the knee. The lady suddenly appeared on the scene, and poor Fido was caressed, while I, her faithful medical attendant during the preceding four long years, received no more telephone calls from that house. I afterward learned that a man who would ill-treat a dog was *cruel at heart.*

Love me, love my dog, was her motto. Kick my dog, and consider yourself dismissed.

The foregoing are only a few instances in which trifles played a conspicuous part in reducing my clientele. I might mention many more similar cases, but not to appear too pessimistic, I will mention a few more agreeable experiences, based on *trifles*, but which were instrumental in increasing my prestige.

For instance, I might mention the lady who took a liking to me from the very first, as it were, "at sight," because I chucked her little Johnnie under the chin on entering the room. The doctor must therefore be fond of children, was her conclusion.

Those little placebo tablets which were administered to little Katie who, on her return from the Sunday school picnic, had thrown up the very generous, indigestible luncheon usually provided on such occasions, and after having got rid of the trash and fallen asleep, really *needed nothing* (but whose fond parent thought otherwise), brought the tears of gratitude to the fond parent's eyes, and made her my friend ever after. She now boasts of my skill in treating children's ailments, and insists that Katie had a narrow escape from scarlet fever or some other dreadful disease.

Then, there was the gentleman who insisted on doubling my fee, because he claimed that I saved the life of his dear wife and child by the skillful use of the obstetric forceps, whereas it was just an ordinary case of uterine inertia, in which a good dose of quinine and an hour's delay would probably have served the purpose equally well.

The child who swallowed a penny, a good one, which, of course, would pass, with or without the placebo which was promptly administered, but for which skillful treatment I have ever since enjoyed the unbounded confidence of the family and their friends: "You saved our child's life, Doctor, and *you know* it, but you are *too modest* to acknowledge it; however, you have our gratitude all the same."

Bless their hearts; would that there were more like them; how happy we would all be.

There was that little trifle of a three-by-five-inch mustard plaster on the pit of the stomach to relieve vomiting, and which succeeded after the other doctor had administered five different kinds of medicine, with the only effect of increasing the disturbance.

And the family is glad to find at last a *doctor who knows something.*

The seemingly trifling act of putting a drop of oil of cloves into the cavity of an aching molar and covering with a drop of sandarach varnish, not only relieved the toothache instantly, but secured a good patient who, with her friends, has remunerated me a thousand-fold in the past few years.

Many similar cases might be mentioned in which the most trifling acts have turned the scale towards success or failure.

Trifles light as air sometimes exert a wonderful influence for weal or woe, and the above-mentioned cases are given merely for the purpose of calling attention to the importance of *little things*, which, though seemingly insignificant in themselves, may ultimately prove to have been the turning point from which the practitioner may date his advance, or vice versa.

Patients are, as a rule, very observant; more so, perhaps, than we are willing to admit, and while the doctor is, so to speak, "sizing up" the patient and his friends, he should not forget that they also are doing the same by him, and with the additional advantage of bringing more eyes to bear upon his actions, so that every little act is noticed by them. And a word, a look, a smile, or frown, which may be immediately forgotten by the doctor himself, is sometimes indelibly impressed upon the memory of the patient and his friends, and it not infrequently happens that afterwards, when the physician discovers that he has been supplanted by a rival, he will find on careful investigation that the change of doctors was due, not so much to lack of *skill* as to lack of *tact*. And that the idle word that he thoughtlessly allowed to escape him, has proved to be the dead fly in the ointment.

When we come to apply our theory of the importance of little things (trifles) to the scientific side of medicine, we find it too frequently overlooked or disregarded.

In the modern "so-called, up-to-date," practice of medicine, we are prone to consider everything only from an ultra-scientific standpoint, and while engaged in the industrious investigation of the infinitesimal, we are apt to lose sight of the trifles which exert so great an influence in the efforts of Nature toward the cure of disease. Having discovered, as we believe, the bacillus which has produced the pathological condition, we lend all our energies toward the destruction or extermination of the offender, forgetting that, in many cases, the recuperative power of Nature itself is amply able to combat the ravages of the germ, if only assisted in her efforts by the intelligent application of, in many cases, only apparently trifling measures. In this connection we might refer to the somewhat trite subject of fresh air and pure water, those two elements which, to the mind of the average layman, represent the most powerful enemies to health, to be constantly guarded against.

Even the doctor but recently out of college, must often have been impressed by the morbid fear exhibited by patients and their friends of those two most essential allies of Nature, in her efforts to effect a cure. Now, the giving of a glass of cold water to a fever-stricken patient is a trifling act, yet it often means the difference between a restless, disturbed sleep, and a peaceful slumber which conserves the patient's strength. The same might be said of fresh air, of which our patients are so often deprived.

Even in health we rise in the morning invigorated rather than depressed after sleeping in a well-ventilated room.

The simple, trifling act of opening the window a few inches, determines whether we shall inhale a life-giving elixir or a potent poison.

The trifling difference between a clean spoon or a doubtfully clean depressor or spatula taken from the pocket and used on the patient's tongue, has been known to turn the scale for or against the physician using it, in the estimation of the patient.

Even the neglecting to wash a thermometer before returning it to its case after using, is generally noticed by the patient or his friends.

On one occasion I refused (and justly, I think,) to allow a celebrated dentist to place his mirror in my mouth after notic-

ing that he had neglected to cleanse it since using it on another patient, and transferred my patronage to a dentist who scrupulously washed his hands before inspecting my teeth. Needless to say that the patients I recommended to the latter amply repaid him for his regard for trifles.

The difference between the trifling pain incidental to the opening of an abscess and *no pain at all* felt by the patient may seem too insignificant to the scientific surgeon, but it means a good deal to the patient whether a local anesthetic is used or not, especially if the patient be a child.

The liberal use of toilet paper (which can be immediately burned) for wiping away the discharge from the nose or mouth of a diphtheritic patient, instead of the filthy towels or cloths which are often used for that purpose, will sometimes limit to a great extent the risk of dissemination of the disease among other members of the family. The trifling cost of three or four feet of rubber tubing attached to a catheter, the distal end of which can be dropped into the receiving vessel under the bed, will prevent the unnecessary exposure which is sometimes so distasteful to a fastidious female patient. The careless passing out of a handful of tablets or pills from the doctor's pocket, as is sometimes done, must certainly create a less favorable impression on the patient than if such medicine is carefully placed in a neat box with directions written thereon. This is only a trifle, but worth while.

Even the little cotton swab on the end of a toothpick for the application of a remedy to the eye, and which can be afterwards thrown in the waste basket, is less costly, but preferable, to the camel's hair pencil, which may have done duty on many previous occasions, and with less risk to the patient.

Remember, there is a disease known as gonorrheal ophthalmia, also syphilitic iritis, which *might* be transmitted by that little camel's hair brush.

The extraction of a tooth is a trifling matter, provided you are an expert, and do not break it. Should that occur, however, you will wish that a dentist had the trifling fee, and you had retained your patient, for he will almost certainly leave you, and ever after give you a bad name.

The use of a clean bandage, or a slightly soiled one, will often determine whether you or the doctor across the street will receive the next office fee from that patient.

Even your prescription blank, bearing also a druggist's name, will often militate against you, especially if the said druggist's charges are high. The laity still cling to the absurd notion that doctors receive a commission from druggists.

There are many other trifles that might be mentioned, but which will readily suggest themselves to the thoughtful physician, and if the reader should impatiently cast this article aside, and condemn it on the plea that it deals only with *trifles*, I would beg to remind him that he had a fair warning in the *title*. And also respectfully refer him to our esteemed homeopathic brethren, who have always placed implicit faith in the importance and efficacy of *little things*.

"*Trifles make perfection, and perfection is no trifle.*"

22 East One Hundred and Twenth-Sixth Street

[Written for the MEDICAL BRIEF.]

Norwegian Names of Drugs Which Are Commonly Carried by Most Ships Flying Norway's, Sweden's and Denmark's Flags, Translated Into English and French—Ships' Disinfectants, and Their Value.

BY GEO. H. TICHENOR, JR., A. B. (TULANE), M. D. (TULANE),

Former Medical Inspector Louisiana State Board Health; Member Association of Officers and Surgeons Confederate States Army and Navy, Etc.
New Orleans, La.

The following drugs, according to the laws of Norway, must be carried in every ship's medicine chest. When a vessel is first fitted out in Norway, of course, all the names of its medicines in the chest are labeled in their language, but as the vessel sails from country to country, and runs out of different medicines, they are replenished at the last port from whence they sailed; consequently, the pharmacist

to whom they appeal for purchasing a new supply is often puzzled to decipher "jaw-breaking names," and the health officers and physicians who may be called on to attend the sick among the crew and passengers are often in a worse predicament.

The following list of drugs, with strengths and combinations, will be of great service to seaport health officers and attending physicians, judging from my own experience, especially as Norwegian ships are in the majority at every large port:

Norwegian—Natron (soda) dobbelt kulsurt. Bicarbonate soda, bicarb. natricus. French—Bicarbonate de soude.

Norwegian—Opiums draaber. Tincture opium; tinctura opii. (It is put up according to Ph. Brit, 1885.) French—Teinture thé baique.

Norwegian—Opium-bly-pulver. Opium, powdered. French — Thé baique en poudre.

Norwegian—Opium pulverat ana 0.03 ctgm. Acetate of lead, acetas plumbana, ½ gr. French—Acetate de plomb ana (0.03 ctgm.).

Norwegian—Opodeldok flydende (saebespiritus). Compound liniment of soap (liquid). Spirit saponis camphorat. French—Baume opedeldoct (liquide).

Norwegian — Piller afførende paa 25 ctgm. Compound pills of colocynth (of 4 grs.). Pilul. colocynth comp. French —Pilules de coloquinte composeés de 0.25 ctgm.

Norwegian—Karbol-jod. glycerin. Acid carbol, 1 gm.; carbolic acid, spirit dilut., 1 gm.; diluted spirit ana 16 grs.; tinct. iodi, 0.5 gm.; tinct. iodine, 8 grs.; glycerin, 10 gm.; glycerine, ⅓ oz. French—Acide phénique, 1 gm.; alcohol de 67° 1 gm.; teinture d'iode, 0.50 gm.; glycerine, 10 gm.

Norwegian—Kautsckuk spar a drap. Heft plaster.

Norwegian—Klorsurt kali. Chlorate of potassium, chloras kalicus. French—Chlorate de potasse.

Norwegian—Kviksølv-saebeplaster. Mercury plaster, soap plaster ana, empl. hydrarg., empl. saponat ana (Ph. Germ.). French—Emplâtre mercuriel, emplâtre de savon ana.

Norwegian—Lapis opløsning. Nitrate of silver, 10 grs.; distilled water, 1 oz.; sol. nitrat. argent (2%). French—Nitrate d'argent, ½ gm.; eau destillé, 25 gm.

Norwegian—Jodkalium i pulvere paa, 10 gm. Iodide of potassium in powders, ⅓ oz.; iodet kal. cont. French—Jodure de potassium en poudres de 10 gm.

Norwegian—Jodoform. Iodoform, iodoformium. French—Jodoforme.

Norwegian—Kamferdraaber. Spirit of ether with camphor (6—1). Æther, spirit camphor. French—Teinture étherée de camphre.

Norwegian—Karbolsyre, raa, tié. desenfektion. Carbolic acid, crude; acid carbol. crud. French—Acide phénique impure.

Norwegian—Karbolsyre, revset. Carbolic acid liquid purified; acid carbol. pur. liqvef. French—Acide phénique pure (90%).

Norwegian—Dover's pulvere paa 60 ctgm. Compound powders of ipecac of 10 grs.; pulv. ipecac opiat. French—Poudres d'epecacauan ha opia cées de 60 ctgm.

Norwegian—Engelsk salt. Epsom salts, sulphas magnesia. French—Sulfate de magnésie.

Norwegian—Heft plaster, alm. (unden terpentin). Adhesive plaster (without turpentine). Empl. adh. cummastice ext. French—Sparadrap adhesif.

Norwegian—Hoffmann's-draaber. Spirit of ether; æther spirit. French—Ether sulfurique alcoolisé.

Norwegian—Hostedraaber. Paregoric elixir; tinct. opii benz. French—Elixir parégorique.

Norwegian—Jerndraaber. Tincture of malate of iron; tinct. ferri. pom. French —Teinture de mars pommé.

Norwegian—Braekpulvere paa 1 gm. Ipecacuanha powders of 16 grs.; red. ipecacuanh. pulv. French — Poudres d'epécacuan ha de 1 gm.

Norwegian—Chinin-pulvere paa 1 gm. Hydrochlorate of quinine in powders of 16 grs.; chloret. chinic. French—Chlorhydrate de quinine en poudres de 1 gm.

Norwegian—Chinadraaber. Compound tincture of cinchona; tinct. chinæ comp. French—Teinture tonique de Whytt.

Norwegian—Citronsyre. Citric acid; acid citr. French—Acide citrique.

riorly, and with fingers and spud working up along the anterior and posterior wall of the cervix until we reach a point at about the junction of the cervix with the body, where we will enter the pelvic cavity; first, anteriorly, then introducing the fingers and grasping the body of the uterus, it is tipped forward and pulled down into the vaginal canal. The index finger is introduced beyond the broad ligament, and with scissors incisions are made just outside of the anastomotic artery, or between this artery and the body of the uterus, until we have severed the connection of the broad ligament to the uterus. We then operate likewise upon the opposite side.

Should it be necessary to remove the ovaries as well as the uterus, after introducing the fingers in the peritoneal cavity, through the opening in the vesico-uterine ligament, we bring down the ovary and ligate the pedicle produced by pulling down the ovary, removing one or both ovaries by this method.

We find by operating in this manner that only small branches of the anastomotic artery are severed and require only grasping with the hemostat. That is, it is not necessary to use ligatures to stop the bleeding, but merely grasping these small vessels with hemostats and twisting them will stop the bleeding; thus we eliminate the element of shock from hemorrhage, and the patient recovers speedily.

The only distress produced is that caused from the anesthesia. Most patients will recover and be able to leave the bed in ten days to two weeks and will be out of the hospital in three weeks. This is quite a contrast to those patients who are operated by the abdominal route, and quite an improvement over the method of operating and dividing the uterine or anastomotic artery,

In cases where this artery is severed there is always danger of secondary hemorrhage, while in the method described above there is no danger of such a complication.

1802 North Kingshighway.

[Written for the MEDICAL BRIEF.]

The Early Diagnosis and Symptoms of Consumption — Arguments Drawn Therefrom for the Subcutaneous Injections of Oil.

BY THOS. BASSETT KEYES, M. D.,
Chicago, Ill.

The diagnosis of consumption should be based upon its symptoms, and not from tests as to the reaction of the system, for that is sometimes deceivable, while the symptoms plainly point out the course of treatment and ways of living which the patient should adopt. An old tubercular lesion may remain dormant and not cause the patient the least annoyance, or interfere with his health, providing he is living a proper life as to matters of food; indeed, by this means alone, through some change in the life of a tubercular person, as an occupation which has increased his appetite, or through change of diet, the disease has been cured.

While the tuberculin test has been usually advocated only in the early stage of the disease, where the symptoms are obscure, I do not remember it, for the reason that it very often produces in these cases more than a slight fever, and, in addition, may produce chills and general malaise and aggravation of the symptoms, which, lasting for some days, weakens the patient, takes away his scanty appetite, so that from the test he has often lost in weight and, as a consequence of all the conditions enumerated, has lessened, rather than strengthened, his chance of recovery.

That early diagnosis of consumption is so important has been the excuse of the stanchest advocates of the tuberculin test, but I take it that the pretubercular symptoms, which should cause alarm, are so prominent that they can not fail to be recognized, and were treatment began at this time it would be more as a preventive measure. But it is only too often that the consumptive patient does not seek aid in the early stage, or his physician, recognizing the disease, has spared him of the knowledge, sometimes the physician himself being at fault, if he has allowed the disease to advance. Though understanding human nature, we

know that some of these patients do not follow the advice in the manner in which they should; again, how many have made a proper study of this disease, and are able to plan a diet disguising the large amounts of butter and fats, so as to be relished by the patient, and which are so essential to the cure of this disease, together with other articles of diet which, by their mechanical action, aid in the digestion of these fats?

In the diagnosis of early tuberculosis we must first consider the following points as aids:

1. The appearance of phosphate in the urine.

Phosphatic absorption and fat assimilation are closely connected, so much so that when hogs are fed upon a milk diet, in which all fats are eliminated, so far as practicable, phosphaturia develops. The consumptive patient, passing large amounts of phosphates in his urine, is cured of these symptoms by the subcutaneous injections of oil, and it is evident that the assimilation of the oil produces conditions for the greater absorption and assimilation of the phosphatic salts.

2. Loss of appetite, some indigestion, and a dislike for fatty foods, anorexia, and nausea, with progressive loss of weight, inequality and dilatation of the pupil.

Such symptoms call for outdoor life and forced diet.

3. Sleep sweats, general relaxation of the system, and a tendency to sweat from slight exertion, with a rise of temperature in the afternoon, then morning expectoration and cough, perhaps pain in the affected lungs, or in the supraorbital region and neck, and sometimes hemorrhage.

These symptoms call for subcutaneous injections of oil, for by their use we strengthen the patient by building up nutrition, and we furnish material for maintaining the normal heat of the body. Nature, being thus supplied, does not seek to conserve and save her forces and fat tissues from too rapid oxidation, by cooling the body with perspiration at the expense of the vitality and force of the body. On the contrary, the substance for oxidation and care of diseased tissues is furnished by the oil injected, as well as the substance for furnishing force and vitality to the body.

4. The period of invasion of the germ is commonly marked by symptoms of a chronic bronchitis, without pulmonary signs.

The symptoms which we have enumerated are premonitory, after deposit of the germs; when these are being thrown off, with consequent symptoms, the diagnosis is easy, but in the treatment of this disease we should not wait for advanced symptoms before beginning the treatment. The symptoms of cough advance with the amount and extent of inflammation of the lung tissue, and the sensitiveness of the throat, and the amount of anemic, blood pressure, and cardiac disturbances. When all of these symptoms have arrived, coupled with loss of weight, it is not necessary to confirm our diagnosis by finding of the germ. The general physical appearance of our patient, together with the symptoms, enable us to base our diagnosis.

Without entering upon the differential signs of this disease, we may mention signs of the diseases which have been said to be often confounded with tuberculosis, and from which differential symptoms should be kept in mind.

Chronic bronchitis, chronic streptococcic, or influenzal pneumonia, and syphilis of the lung, are among the inflammatory diseases of the lung which bear closest resemblance to tuberculosis. But when symptoms of wasting disease of a chronic type are present, with or without severe pulmonary symptoms, they call for, as the principal part of their treatment, nutrition, and this is best given by subcutaneous injections of oil. The same as to treatment can be said of these other diseases which may be mentioned as having symptoms similar to those of early tuberculosis, such as pernicious anemia, leukemia and pseudo-leukemia, but which require differential diagnosis; not on account of treatment so much as for the satisfaction of the patient and physician. As the symptoms of tuberculosis advance, all of the premonitory symptoms increase in severity and give rise to certain signs, characteristic of pathological conditions, which varies according to the form of disease and the resistance of the body,

always kept open, fronted the sea, and was but a few steps from the beach. The first fly was caught after she had alighted from a soaring flight about the chamber. This fly was as alert, active and seemingly as healthy as any other, and not at all easy to catch. Situated upon both sides of the abdomen, near the hinging of the wings of the insect, were bright, red projections, standing out from the brown body surface like the wattles on a game-cock. The excrescences, to my sight, aided by a hand glass, appeared like small coral buds, and were immovably attached to the first abdominal segment. After a few moments' close observation, what might prove to be legs extending out from beneath one of the little bulb-like bodies, could be made out. Confining the fly in an open box of about a cubic foot and a

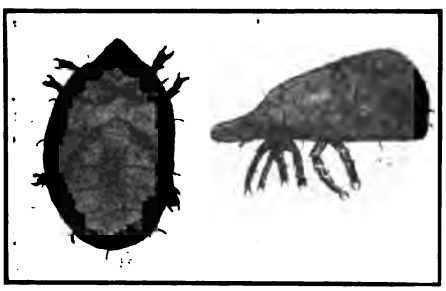

FIG. 1. Housefly Parasite Viewed from below. (Drawn from Life.)

FIG. 2. The Parasite from the Side. (Drawn from Life.)

half capacity, guarded by ordinary mosquito netting, I caught and imprisoned together with the affected insect some twenty-five other flies, of both sexes and of all sizes and varieties.

Believing that what had at first been taken for an oozed blood drop, probably drawn from my own body, and which in some unaccountably way had burst through a gorged fly's body, without much evident disturbance of bodily function upon the part of the insect, was some form of parasitic animal making a host of the fly, I desired to learn what chance there was for dissemination amongst its fellows.

Twelve hours afterwards, when I came to examine my captives, which had been amply supplied with food in the shape of milk-soaked cake crumbs, serving even to attract other insects from the outside as well, I found that all had escaped save one, and he was not the fly which had carried the parasites. As the mosquito

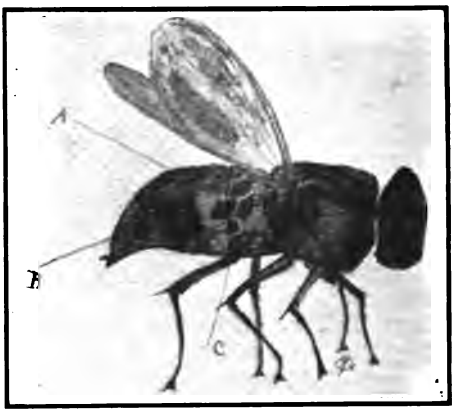

FIG. 3. Showing five of the parasites fastened to the abdominal segments of the insect; relative size of parasite and host well shown. (Drawn from Life by the Author.)

bar had been securely fastened, it was only possible for the flies to have escaped by boring and wriggling directly through the meshes, in a similar manner as that employed by a fish escaping through a net pocket.

The second specimen of parasitic-bearing fly was noted upon the day following, being observed soaring about in the room. It was not the same fly I had had in my possession, for the reason that this was a

FIG. 4. Section drawing of housefly suffering from parasitic disease (A, B) areas which have supported the parasites; in these localities the bristles have been clipped by the parasites. (Drawn from Life.)

much larger insect. While the first was observed to have had as many as eight of the little coral bodies upon its body, the second had but four clinging upon the

sides of the abdomen, and one far removed upon the last body segment.

Examination of the mosquito netting failed to disclose any of the parasites which might have been dragged off during the fly's passage through the netting, though such an event could be hardly possible, considering the protected sites beneath the wings, chosen by the parasites as points of attachment.

The second fly eluded all efforts at capture, and after giving me chance for but two or three observations, darted out of the window.

The third specimen was captured almost a week later upon a railing in one of the deserted ocean pavilions. This fly had two of the parasites upon its body. One fastened upon each side to the first segment of the abdomen, sheltered beneath the wings behind the hinge. This fly, a male, was distinctive by the rainbow brilliancy of its wings. It was, when captured, as busy in its reconnoitering flights as any other of its kind, and seemed undisturbed in being forced to play the role of host. But seven other flies were noted, after a careful observation, about this large pavilion, the white walls of which made the search for insects a comparatively easy one. To insure against the escape of the fly and its parasitic guests, all were sealed up in an air-tight receptacle until a leisurely-conducted microscopic examination might be made.

Description.—Systematic study of the parasite demonstrates an oval, or distinctly lemon-shaped body of a coral red color, being one thirty-second of an inch (0.8 mm.) in length, sparsely covered with short, prickly, red bristles. The surface of the body presents a roughened, granular appearance, not unlike the minute granulations seen upon a healing wound, and is, doubtless, due to the scale or plate formation entering into the makeup of the external body wall. Five distinct flexures, extending completely across the body, in an irregularly convex direction toward the head, and more pronounced upon the ventral surface, divides the insect into six segments. Aid to locomotion and additional security when fastened to the body of the host, seem to be their function.

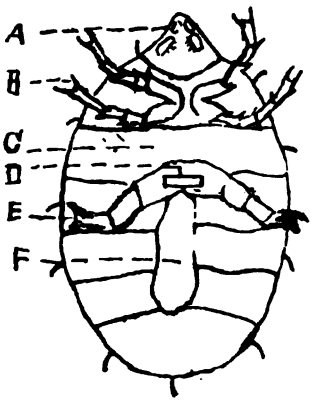

FIG. 5.

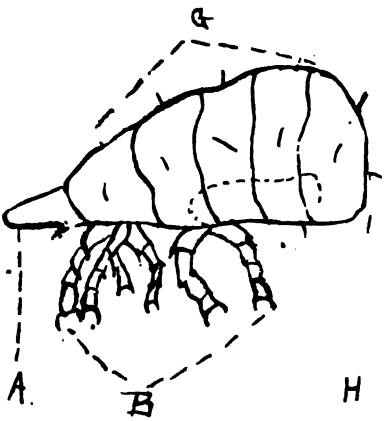

FIG. 6.

FIG. 5. Diagram of housefly parasite. (A) Headpiece and mandibles; (B) fore legs; (C) body; (D) tube connecting the two sides of the animal's digestive apparatus; (E) hind legs; (F) stomach.
FIG. 6. (A) Headpiece; (B) legs; (G) body segments; (H) surface bristles.

Locomotion is secured by means of three pairs of legs, two of the pairs being arranged together upon the second segment, and a third larger pair behind, fastened beneath the second and middle segments. The legs are jointed, covered with a number of fine, red hairs, and end in pincer-like projections. The hind legs are much longer and thicker than the fore, the clawlike extremities being flatter and stronger.

From the claw-like tips, and from the fact of the parasites having been constantly found upon the first abdominal segment, it seems probable that the little

animals are not given to roaming over the body of the host, to which they have attached themselves.

Extending for about one-third the body distance backward from the hind legs, is a dark blue, rounded, oblong, granular body.

Rupture of the outer wall of the parasite sets free a quantity of red coloring matter, after which the parasite becomes of a brownish-yellow hue, and the oblong body, capped by a tubular crossbar of blue, becomes more definable. The tube and receptacle, with the mouth and jaws in the headpiece, united by a minute channel, without doubt make up the major portion of the animal's digestive system. Action of the parasites upon the fly's body is manifested by an irregular area about the size of the parasite itself. The short, sharp bristles which cover the host's body

FIG. 7. Diagrams showing relative size of housefly parasite. A, housefly parasite; B, Ascarus scabiei (itch mite) giving rise to a disease of the skin called itch; C, pediculosis pubis (crab louse).

are found clipped smooth to the surface, as a sheep-cropped lawn, probably due to the action of the parasite in its endeavors to get close to the host. In addition, the affected areas are somewhat darker, roughed and granulated, seeming to imply that the parasite draws its nutrition from the host more by a gradual suction action through the cutaneous surface than by puncture and rapid withdrawal, as manifested by the ordinary mosquito bite.

The little animal, which might well be known as the coral parasite, for its presence when first observed recalled vividly to my memory the beautiful red coral to be seen in the depths of tropical seas.

Mr. Chittenden, acting chief of the Bureau of Entomology of the United States, Department of Agriculture, Washington, D. C., in a correspondence, has stated that the specimen described is probably a *trombidium muscarum*, of the family of harvest mites or "chiggers." Referred to Mr. Nathan Banks, the department specialist in comparative entomology, that gentleman stated that while the specimen sketch certainly pictured the young of the *trombidium*, he was not positive that it was *muscarum*.

The pathological significance of the genus *trombidium* rest in the larval state of the animal's existence. They are considered not true insects belonging to the order *Arcarina*, *exapoda* and members of the class *Arachnida* being associated with ticks and spiders.

These little animals are found pretty generally distributed over the world, being commonly but erroneously known in the Eastern States as "ticks," in the Southern and Gulf States as "chiggers," in Central and South America as "red bugs." In England and Scotland they are called "goose berry bugs." Upon the continent of Europe and in Japan the presence of the mites often cause great annoyance in rural districts.

The mites are found to inhabit damp localities, as along the edge of river banks, in the forests and "bush." When seen in such places they are found to occupy the under surfaces and shaded portions of leaves and shrubbery, as the majority of varieties avoid direct sunlight.

Mr. Banks, describing the life history of the harvest-mite, states that the female deposits its eggs in the spring of the year to the number of four hundred upon or in the ground. These later develop and attach themselves to some form of insect hosts. Maturing, they later drop off as full grown *trombidæ*.

The larved form have six legs, while the adult mite has eight. Parent mites are predaceous on true insects.

In his paper upon "Chiggers," published under the sanction of the Department of Agriculture, Mr. Chittenden has described the symptoms and mode of attack of these mites upon the human body. Burrowing into the skin, the animal becomes engorged with blood and sets up an inflammatory reaction over an area of from a quarter to three-quarters of an inch in extent. A feverish con-

dition of the skin comes on within an hour or so after the attack, or may be delayed for from twenty-four to forty-eight hours subsequently, varying with the susceptibility of the individual attacked to the poisonous effects of the animal. Children suffer more than do adults, and young women more than older women, doubtless due to a more delicate skin. After long residence in infected localities a form of immunity develops in the individual, due to (1) a toughening of the skin, and (2) to inoculation from infection.

The portions of the human body most affected by the results of these insects are the feet and ankles, about the knees, neck and armpits. Preventive treatment for those who have been exposed to mite-infected regions is a hot bath containing a strong solution of salt, or soap. After infection has commenced, sulphur in the form of the ointment or flowers of sulphur, dusted upon the body and in the clothing. Napthaline has been successfully used by Dr. L. O. Howard, in Mexico, and Mr. E. A. Schwartz, in Cuba, against these pests. Ammonia, bicarbonate of soda (cooking soda—salaratus), carbolic acid solution ten per cent, dilute tincture of iodine, collodion, may be applied. Alcohol, camphor, oil of peppermint, afford but a temporary relief.

49 East Sixty-Fourth Street.

[Written for the MEDICAL BRIEF.]

The Practice of Homeopathy.

BY N. SISCA, M. D.,
Killarney, Queensland, Australia.

(Continued from page 900, December, 1906.)

Single Remedy.—Much need not be said of this, the last of the three fundamental principles of homeopathy, and the meaning of which is that we should never give more than one medicine at a time, and that medicine should be the one, the "pathogenesy" of which covers, if not all, at least a large majority of the objective and subjective symptoms of the case, or what in homeopathic phraseology is known as the "simillimum."

From the homeopathic standpoint, this is as much a corollary of "similia similibus" as is the principle of the reduced dose, and, theoretically speaking, it would, no doubt, be most desirable and convenient to find one remedy quite sufficient to meet the requirements of each case, but in practice there are serious obstacles in the way.

First, it would, I think, be rather difficult to prove that in every case the so-called "totality of the symptoms" belongs to one remedy, and the homeopaths themselves tacitly admit that it is so when they prescribe medicines, as they almost invariably do, "in alternation."

Second, even if it were not so, it is not every practitioner who can boast of being able to hit upon the "simillimum" at a few minutes' notice. So that, on the whole, I think we may regard the principle of the single remedy more as an esthetic desideratum than as anything which can stand the test of everyday requirements. Homeopaths are wont to make fun of what they facetiously call "allopathic blunderbuses," and to pity us because, they say, we are not able to tell which of the many ingredients in our mixtures is the one that fails or succeeds in curing. But we, in our turn, while admitting at once that many of our prescriptions might with advantage be much simpler than they are, would ask them kindly to tell us, when they prescribe two or three medicines in alternation, whether it was number one, number two or number three that turned out to be the "simillimum." The fact is, that in most cases one remedy is not sufficient, and that, therefore, by persisting in giving only one remedy, we would simply waste time and thus run unnecessary risks.

In years gone by many a follower of Hahnemann honestly believed that it was not safe to have medicines bottled up and kept on the same shelf, as the very fact of their being so close together would spoil them. But we do not hear much of that now, and I could quote several instances in which homeopaths of good standing were recently broad-minded enough to admit that to prescribe two, or even more, medicines together is not, after all, the unpardonable sin which they have been in the habit of believing it was. And, further, were I inclined to retaliate, I might ask how many hundreds, if not

thousands, of homeopaths have not prescribed the famous homeopathic pot-pourris, known under the name of "Mattei's remedies."

For my own part, I know of no reason why medicines which are not incompatible should not be given together, especially when the case is a serious one and time is of great importance.

And this closes, so far at least, as we are concerned, what our friends, the homeopaths themselves, will probably admit to be a brief, but fairly accurate, summary of the history, theory and principles of homeopathy. They are quite welcome to find flaws and imperfections in it, but I feel confident that this time they will have no reason to complain of misstatements and misrepresentations. I have purposedly left unnoticed such things as "Dynamisation," concerning which the Hahnemannians themselves can not agree, and "Keynotes and Characteristics," which are seldom reliable, and which can only serve the purpose of boiling down homeopathy to a very undignified epitome of therapeutic practice, and, worse still, of further increasing the already too numerous army of homeopathic quacks.

The remaining notes will be devoted to a study of the practice of homeopathy, and to a brief outline of comparative *materia medica.*

[Written for the MEDICAL BRIEF.]

Oletheric Tincture of Biniodide of Thymol.

BY EPHRAIM CUTTER, M. D.,
West Falmouth, Mass.

To a certain extent animal oils have been in use in America because of their osmotic action through the skin. Skunk oil has been much employed for years. The oil of the common goose has also been used; as, for instance, when a babe had a dry cold in the nose. Goose oil placed at night on the nose skin disappeared by osmosis before morning with good effects. The oil of the common hen (*gallus domesticus*) has been used in New England for years in home medicine, and also by the late Dr. C. N. Allen, of Rutland, Vt., forty years ago, who never would have employed it were it not reliable. Skunk oil is expensive. Goose oil*, used by Hippocrates, it is said, is not easy to obtain, but hen oil is procurable in almost every habitable place of man. For this reason, after reading the able article by a German physician on the combination of thym. I_2, with an almost unknown oil by a difficult pharmacal process, I thought I would experiment with hen oil and the biniodide of thymol. Not satisfied with this, I added ether, so that my formula is as follows:

℞ Hen Oil.....½ ounce.
Biniodide of Thymol.....½ drachm.
Sulphuric Ether.....½ ounce.
M.

This, when left to stand, gives a clear liquid, easily applied externally.

When the ether has evaporated it leaves an oily solution of thym. I_2 that answers well where the parts are too dry, as in the ear (excellent). Or a bandage can be applied and then soaked in the oletheric (oleum-ether) tincture. But for most external purposes I prefer the ethereal tincture, as the thym. I_2 will dry on and hold where no bandage can well be put. But the internal use of the oletheric tincture is surely interesting. Today a gelatine vaginal capsule filled with the oletheric tincture was introduced into the rectum, previously anointing the anus with mutton suet. In less than four minutes the patient experienced the taste of biniodide of thymol. The severe neuralgic pain in the rectum was relieved. Surely hen oil was useful here in introducing the thym. I_2 into the circulation as an analgesic. This experience has been had more than once. It seems as if the penetrating power of this oil might be utilized in the use of other drugs. In my opinion, biniodide of thymol is one of the best in the *materia medica. Verbum sap.*

After being with the BRIEF for some time, I have decided that I do not want to practice medicine without it, as I consider the BRIEF the most practical common sense journal published. Inclosed you will find $1 postal order for the BRIEF for another year.—E. M. HUGHES, M. D., Wylie, Texas.

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*Also suggested by Dr. Jackson, dermatologist of New York as a vehicle for iodine, etc., in skin diseases.

[Written for the MEDICAL BRIEF.]

"Deadly Parallels" in Disease.

BY JOSEPH D. HARRIGAN, M. D.,
New York City.

In a recent paper I spoke of the necessity of not long losing sight of the fact that the essentials of many of the epidemic diseases were the same, and that we were not justified in manufacturing new diseases on the slight differences arising from splitting hairs over mere accidentals.

Gradations between the mildest cases of a certain disease, as, for example, typhoid fever, and most severe and deadly forms of the same disease, are acknowledged to exist by the most eminent writers upon the subject. Likewise the gradations are admitted to be almost innumerable.

Thus, Liebermeister says of typhoid fever:

"The diseases which are produced by the specific poison of typhoid fever differ a good deal among themselves. Some of these diseases are so serious that life is inevitably destroyed by them; others are so trifling that patient and physician are left in doubt whether there were really any disease at all. And between these extremes we find every gradation, together with manifold modifications and combinations."—(Ziemsen's Cyclopædia, Vol. I, p. 76.)

Lebert says, in his work on cholera:

"We include under the term 'Asiatic cholera' the diarrheas which occur during the prevalence of an epidemic, cholerine, and the well-defined grave forms of the disease. That all three are expressions of the disease itself, and not simply different degrees of it, is proven by the facts that the simple diarrhea often terminates of itself without leading to cholera; that the grave forms of cholera not unfrequently begin precipitately without previous diarrhea; and, finally, that cholerine occurs mostly without previous diarrhea, frequently does not turn into cholera, and may present in the most positive manner all the signs of the graver forms—only a few of these signs, of course, being present in one and the same case."

Again, Liebermeister, speaking of typhus fever, says:

"It is now agreed by almost every one that among all the affections which have been called typhus, we can distinguish three different diseases, each of which is produced by a specific poison. These are exanthematous typhus (typhus fever), abdominal typhus (typhoid fever) and relapsing fever. * * * Although at the present day this idea of a specific difference between these three forms of typhus is generally recognized, there is, at the same time, a general belief that they are very similar to each other. They are looked on as members of the same genus or of the same family. In the same way as we see in the exanthemata a natural group of different diseases which resemble each other in their symptoms, course, and mode of infection, so the typhoid diseases may be looked on as a group which includes typhus fever, typhoid fever, and relapsing fever, even the plague and yellow fever."

But why stop at these latter?

Why not continue through cholera, the black death of the Middle Ages, and a few more of these terrible complaints? And why not commence further up the line, say, at influenza, for a unit as a starting point for these gradations? We are aware that for ages influenza has been looked upon as the great pioneer in epidemic diseases. Its sojourn with us is measured by years. It has scarcely disappeared from the earth when it returns to the attack with the same and even greater vigor.

Its virulence and malignancy can well be compared with those of any of the other diseases.

To any one with a wide experience with this disease, the most important fact that strikes him is the universal involvement of the mucous membranes.

That is, the effects of the absorption of the disease-poison are shown mostly on the membranes. Many cases there are, however, where the structures of the various organs are also affected, indicating thereby a more intense degree of potency of the poison or else a greater amount of it absorbed.

In the course of many years of experience in dispensary work, I have

treated perhaps fifty thousand cases of influenza, and have watched with interest the varying phases of the disease, from the mildest forms in which a coryza with congested fauces and a mild conjunctivitis accompanied by cephalalgia, announced the presence of the disease, all the way down through the various gradations that showed involvement of the entire digestive system, as likewise the various organs of excretion.

Cases in which the gravest symptoms showed themselves have been so numerous as to attract special attention, and it has been with the most profound interest that I have watched the gastric, the renal, the enteric, the hepatic, the pneumonic, the cephalgic developments, with their resulting effects as shown by the icterus, the biliousness, the almost choleraic discharges, with disturbances of the cerebro-spinal system, running all the way from ordinary nervousness to severe inflammations.

Judging by the symptoms exhibited in various cases, at times I have almost felt justified in calling them, respectively, cholera-influenza, typhoid-influenza, yellow-fever-influenza, etc.

This may sound ridiculous to some accustomed to drawing rigid and inflexible boundary lines around each group of symptoms, and bestowing names suggestive of the conditions present in each group.

But if we would take a bird's-eye view, as it were, of the whole panorama of epidemic diseases, and forget for the moment the nomenclature, or at least subordinate it to the underlying conditions and not to permit it to dominate them and us, swerving our judgment, ridicule, I think, would vanish. If there are gradations between the lightest and most severe forms of a certain disease, *i. e.*, of one certain group of symptoms, is it not also possible to find gradations from one disease into another? More especially as it is acknowledged that the symptoms in certain cases are almost impossible of differentiation.

The mere presence or absence of certain symptoms does not always prove one disease to be entirely different from another. There may also be a transposition of symptoms, the usual sequence not being always followed.

To illustrate, take for example an attack of influenza in which the absorption of the disease-poison is so rapid and abundant that the patient is prostrated dangerously from the very commencement. The sequence of symptoms does not eventuate as in an ordinary attack. The disease may be ushered in by a profuse diarrhea and intense biliousness.

The writer can truthfully assert that he has had hundreds of cases in which the symptoms complained of by the patient were entirely referable to the stomach and intestinal apparatus. The symptoms of "cold," etc., were entirely subordinate to the graver symptoms affecting the entire digestive system, as likewise the excretory functions.

Surround these cases with the climatic influences of a southern atmosphere, soil and flora, and who can say what the developments would be?

Does any one doubt but that the symptoms would be intensely aggravated, their sequence possibly disturbed, and that also entirely irrespective of "germs" as a factor in the matter?

If one were to compare the various epidemic diseases together, not for the sake of discriminating one from another so much as to identify the symptoms common to them all, with a view to harking back to what might be found as a common cause of these symptoms, I think the result would be surprising.

Take, for instance, the matter of cholera. It commences usually, as we all know, with a profuse diarrhea. Then comes the stage of reaction. In this stage, to quote Lebert:

"Congestions frequently occur in the head. The face, under these circumstances, is reddened, but unequally, so that it has a spotted appearance. The eyes are congested and lachrymose. Most patients complain of a fullness and heaviness in the head, or of a dull headache, either general in character or seated in the forehead or occiput. Roaring in the ears is frequent. Notwithstanding a certain tendency to somnolence, the most enfeebled patients are usually sleepless. * * * In a still later stage the so-called cholera eruption

shows itself. This eruption is at one time of erythematous, at another of urticarial character, or it may show a roseola-like appearance."

Verily, one is tempted to exclaim, "Influenza reversed!"

Except for the purely catarrhal symptoms, which are distinctive of influenza, both sets of symptoms are of such striking similarity, only differing in their sequence of arrangement, that they call for more than mere superficial attention and investigation. Concerning the digestive symptoms in influenza, Zuelzer says:

"The mucous membrane of the digestive organs is likewise affected in many cases, although generally not to so high a degree. Loss of appetite, increased thirst, a coated tongue, a bad, pasty taste, sensitiveness of the epigastrium, and, not infrequently, colicky pains and diarrhea, or nausea and vomiting, accompany the disease."

As to the purely catarrhal symptoms, one might almost say, had the diarrhea commenced first, the catarrhal symptoms would hardly have had a chance to develop.

But then, according to some, it would have been another disease, and if severe enough, we might even have called it cholera!

Certainly there is a sufficiency of identity so far in the symptoms as to make it extremely interesting, at least.

Turning to the nervous system, Zuelzer says:

"The prostration of the strength is very great from the beginning; the patients feel extremely weak and exhausted and soon take to the bed. * * * We regularly find, together with considerable depression, very severe pains in the limbs. * * * Patients complain particularly often of hard dragging or boring pains in the calves, the hollow of the knee, the shin bone or the back. * * * In the most severe forms were sometimes observed painful cramps in the calves."

As regards the expression of the countenance, the same author states:

"The patients have a suffering, anxious, and depressed look. According to Landouzy and Biermer, they sometimes have even a typhoid appearance."

Compare the digestive and nervous disturbances of influenza now with those of cholera. According to Lebert:

"Disturbances of the digestive organs are almost constant; there is a bad taste, a thick and heavily coated, yellowish tongue, which is sometimes fissured and dried. There is loss of appetite, thirst, nausea, occasionally vomiting, constipation or diarrhea, or both alternately, distressing meteorism, and illio-cecal pain, especially on pressure; cramps in the extremities sometimes occur."

The typhoid symptoms of both diseases are almost identical.

"The so-called cholera-typhoid is one of the most common forms of protracted convalescence."

Quoting from both authors hitherto mentioned, Zuelzer and Lebert, I submit a few more symptoms common to both diseases that seemingly require only equality of intensity to be identically the same.

Thus, for instance, in cholera:

"Among the complications of the convalescence or of the typhoid state * * * are diphtheritis of the larynx, or pharynx, intense bronchitis, pneumonia, pleuritis, dysentery, diphtheritic inflammations of the bladder and female genital organs, and parotitis."

Comparing these with influenza, we find:

"Among them (the sequelæ) are to be counted such cases as present an intense catarrh of the conjunctiva or of the ear, as a concomitant local affection, or of tonsillitis, laryngitis, bronchitis, or of pharyngitis of considerable severity. Frequently there are only hyperemia of the lungs and intense bronchitis, but also frequently catarrhal pneumonias. Pleurisy, *without* accompanying inflammation of the lungs, appears to be rare. *Croup* and false croup are sometimes present. *Parotitis* with salivation is sometimes observed.

The statements of the earlier observers about the complications of influenza with exanthemata, such as miliaria, roseola, urticaria, petechiæ, scarlatinal spots, erysipelas, etc., seem to refer, as Biermer assumes, chiefly to miliaria and urticaria."

I make mention of these eruptions here to show that such eruptions have

occurred, exactly in an analogous manner to the similar eruptions in cholera.

They are intimately bound up with certain forms of the disease, just as the erythematous rash due to eating shellfish with some people, is connected with the irritation to the stomach caused by this kind of food; or just as the rash of typhus fever is part of that complaint.

Thus, we see a wonderful similarity between the various symptoms in these two diseases.

As far as calling the local affections "complications," we are no more justified in doing so than in referring to the laryngitis, the meningitis, the osteitis, etc., etc., of tuberculosis as complications of that disease.

They are all part and parcel of the complaints, and are given in comparison in this article in an humble endeavor to show that there is a foundation or groundwork upon which the superstructure of epidemic diseases is built.

This foundation seems to be the world-wide affliction known as influenza.

Taking this disease as the unit or starting point and making due allowances for the changes, it must undergo in its course over the world, encountering, as it does, marked differences in chemical constitution of air, soil, water, and exhalations of the varying flora of the different countries, we ought certainly come to a much better understanding of the superstructure and what is most important of all, a far better insight into the pathalogical conditions upon which the symptomatology of these diseases is based. Without such point of departure we are like a mariner without a compass.

Always standing out prominently throughout the ages as the most universal of the epidemic afflictions around which the others seemed to circle and hover, and follow in its train, influenza should serve as a basis of calculation just as the North Star does among the constellations.

It is the key to all the other epidemic diseases. Thoroughly mastered in all its details it furnishes the cipher by means of which the mysteries of the other great universal afflictions may be read.

Through them all runs the influenzic strain. Modified by various circumstances and conditions arising from mostly local causes, still throughout them all we can readily perceive a striking similarity, a family resemblance, as it were, that points unerringly to influenza as their great progenitor.

Limited by space I have touched lightly upon the analagous symptoms of but two of the epidemic diseases. A comparison between several will, I have no doubt, prove of the highest interest.

668 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

Suggestion as an Adjunct to Regular Therapeutics.

BY W. T. MARRS, M. D.,
Peoria Heights, Ill.

Suggestive therapeutics, or psychotherapy, has a proper and legitimate place in medicine, but should be controlled alone by medical men. It is not a thing separate and apart from regular practice. It goes with the every-day work of the physician, whether he be regular, eclectic or homeopathic. Of late years quacks and irregulars have almost taken suggestion as a remedial agent out of the hands of the profession, thereby causing this branch of medicine to, in some measure, fall into disrepute. This is not as it should be. Many ailments and perversions can be reached through the influence of the mind, as they can be in no other way.

The physician is the only person to make application of this agency with any degree of accuracy, for he alone is competent to diagnose properly. Indeed, it is simply the business of the physician to put an ailing person in that environment which will best enable him to recover. It is his business to look into the patient's mental and psychic atmosphere as well as the kind he breathes.

Viewing the matter comprehensively, the doctor practices suggestion every day of his professional life. This he does whether he wills to do so or not. One of the chief differences existing among medical men is their personal equation and the manner in which they impress patients. The doctor who most readily

grasps the patient's psychic wants and needs will, other things being equal, stand the best chance of curing the patient. Such a man is a metaphysician who sees and takes cognizance of many little points which others would pass unheedingly by. He sees in his patient the half-shed tear, the suppressed sigh, the pent-up emotions and defeated hopes and aims. A little timely and kindly talk from the medical man may accomplish better results than a prescription sent to the corner drug store. Think of the lonesome patients in hospitals who toss about restlessly and bide the time for the doctor's arrival each day. They are cheered and animated by the pleasant greeting and encouraging words of the doctor if he be a man who radiates sunshine. But if he happens to be of pessimistic turn, woe unto his patients.

Suggestion should be given timely and judiciously, when it adds materially to the efficacy of medicine. Suggestion may be given by words, acts, gestures, insinuations and a thousand different ways. The patient should always be measured, and our methods and manners gauged accordingly. Too much talk is calculated to defeat one's purpose. We all admire the person who talks enough but are inclined not to place our confidence in the one who talks too much.

When medicine is given for a certain purpose the attention of the patient should be called to the fact that he may experience specified results. It is a law of psychic phenomena that the things we ardently expect or hope for, are the ones most likely to be realized. This fact accounts for much illness in which periodicity is a factor. How many persons we hear remark: "About this time every year I have a spell of some sort." Many ailments as well as their alleviation depend upon purely mental influences. One patient of the writer cured himself of the tobacco habit, erroneously inferring that the medicine given him was for that purpose. One lady said she felt the cooling effect in her kidneys *immediately* after she had taken a dose of a diuretic mixture. Great is imagination! And by the way, suggestive therapy is simply the wild imagination of the patient directed in a way that is conducive to his best interests.

As already intimated, you can expect your best results from psycho-therapy when used to supplement medicine. It often takes a pill to drive down a suggestion. The patient usually desires something tangible to which he can anchor his faith. We give medicine to help a woman in labor. We tell her it will strengthen her pains, but not increase her suffering. The expectant attitude of the mind materially aids in securing the results desired. If we tell a tobacco or alcoholic habitue that the medicine—apomorphine or emetine—will cause him to fall out with those things, he will attribute his nausea to the specific (?) action of the remedy, thereby adding force to the treatment. If he be given strychnine or other tonic to build him up, the "building up" concept should be emphasized.

We sometimes hear reports of bread pills producing catharsis under certain conditions. This is on the whole an exaggeration. It is true that suggestion given under profound hypnosis may accomplish nearly anything. The post-hypnotic suggestion in its exact fulfillment is marvelous. But after considerable research, extending over a number of years, I do not think it a good practice to put patients into a state of deep hypnosis. However, there are stubborn infirmities that can be reached in no better way than by suggestion given under deep passivity.

Enuresis is a condition that is very amenable to suggestive treatment, for it is usually due to habit pure and simple. Belladonna, atropine, etc., may be given for it, but unless the treatment in some way arouses an auto-suggestion in the mind of the sufferer, no good results may be obtained. In addition to correcting hygiene the child must be given encouragement. His mind must be impressed with the idea that he is going to get rid of the nasty habit. A homeopathic physician was very successful in treating this condition. A regular man was not so successful, so he made inquiries, and found that his homeopathic brother gave *sepia*, sixth potency, one pill every thirty minutes. So the regular physician got a

batch of the little sepia pills and gave them half-hourly with results highly satisfactory. Later on he got to giving placebos, and found he was just as successful. The secret of the matter was that he gave *something* at frequent intervals. The child had the *cure idea* constantly before him which, in time, produced its effect upon nerve cells and centers.

The above incident naturally makes us wonder whether many of the thousands of drugs in daily use do not owe a goodly portion of their efficacy to suggestive influences. If a remedy appeals strongly to a patient's imagination, and he associates it with his particular ailment, he is likely to experience good results, whether the drug exerts any physiological action or not. The homeopathic physician is successful with his little pills which contain a millionth part of a physiological dose. Why? He searches out symptoms and makes the leading ones the storm-center against which the little pills are directed. The patient associates these symptoms with an alleged specific, and the effect upon the mind is salutary, to say the least.

The suggestions given with regard to the ailments named apply with equal force in hundreds of other cases. Suggestive therapeutics should, therefore, be regarded as an adjunct to other methods and measures. It has not been my intention in this article to speak deprecatingly of drug treatment. We have a few—very few—remedies that are nearly specifics, and many others that are useful. But, perhaps, physician and patient would be as well off if ninety per cent of the drugs in general use were relegated to the bottom of the sea. Medicine-taking, in the way that it is practiced, is a relic of barbarism. Suggestive methods —by some other name, perhaps—will, in the future, be employed in the treatment of all perversions and psychoses.

THE MEDICAL BRIEF is a fearless exponent of professional right and liberty. All that honest physicians desire is justice and individual constitutional protection. —W. H. SMITH, M. D., Shell Rock, Iowa.

[Written for the MEDICAL BRIEF.]

What I Have Observed in Twenty-Three Years Practice of Medicine.

BY E. E. TRUITT, M. D.,
Maquon, Illinois.

I have observed that some physicians, the older they get in practice, the less faith they have in medicine. I am not one of these, as I am thoroughly satisfied with the results that I have gotten from the administration of drugs, and am more gratified than ever in the success I have in removing disease. Persons will, and must die. This is no reason we should be discouraged with our practice, as we should know when a case is curable and when not. When you hear a physician remarking that the practice of medicine is a humbug, you can put it down that he is a failure *in toto*. That he is not a doctor by nature; he lacks talent, and is not educated in medicine. The natural doctor can see, by his excellent human nature, the unbalanced physiological processes, and if well versed in materia medica and therapeutics, can select remedies to restore them to normal, if nature is not beyond assisting.

We have observed that the longer he is in practice the more he works for the fee, than fame or the love of his profession. That about one-half of the people think that gray hair and a wise look makes him their choice, while the other half cry out old fogy, and think that he should retire. We think, as a rule, that the latter is correct. That the longer he is in the profession the less remedies he uses, and smaller doses; that the loss of a number of cases takes the conceit out of him, and he begins to learn that he can not save them all. That a certain number of patients will take advantage of friendship and think it will be all right with "Doc" if they do not pay him. Doc hardly thinks so, and soon will begin to naturally hate the calls of such friends. That it is best to be independent, even if you are poor. That it is best to not promise a cure in any case, as so much depends on the patient, and that we are treating a wonderfully and fearfully made body, and many phases may arise worse than the first.

That it is best not to explain too much of a patient's disease to them, but briefly and concisely. Not to make them feel that they are worse than they really are —simply for a fee. That in chronic cases to have so much per week or month for treating a case that the patient may realize that he is constantly in your care, and will be obliged to call and see you and have medicines renewed at times.

That you have a uniform system of charging—enough, but not too much—the same for all classes of patients. That to be honest and courteous to all—especially children. When we have a system of charges that are reasonable, and we have tried to be honest and conscientious in our relations to our patients, and they yet express dissatisfaction, we feel that we have done them no injustice, and have no remorse of conscience.

We have observed that the practice of medicine in most communities is overdone, and that only a few doctors ever get well off financially through practice alone.

[Written for the MEDICAL BRIEF.]

The Bible Myth of Eden, Adam and Eve.

BY GEO. F. G. MORGAN, BACH. DIVIN., M. D.,
San Francisco, Cal.

In the September number is a short article by Dr. Frank Bruner on the "Garden of Eden, Adam, Eve," etc.

It now seems surprising to me, both a theologue and a practical medico, that men of exact scientific training, as the surgeon and physician of today must necessarily be, can be so deluded by their earlier education and mythologic "religious" (?) instructions as to give ear and credence to such Oriental archaisms and snake stories as that mentioned in the Book of Genesis—above referred to.

The serious side of the matter is that, while modern theologues unwillingly admit that THE WHOLE "EDEN" STORY IS ONLY A FABLE, as all sensible people must see this talking-snake story to be; yet these same "theologians" go straight ahead with their doctrinal preachments built upon this very (pro-)genetic fable, and declare to their hearers: "Thus saith the Lord," as though they were really preaching the facts and truths of the universe, instead of imaginary things, founded on the above fable of the snake, the garden, the woman and her garden companion.

Who was the ancient "Adam?"

A man, male?

No! She was ancient Egypt's Goddess of Death, "Atum or Atoum."

Who was "Khaiva or Eve?"

She was the "Living-One, Kayed-out One," the female, the type of all living motherhood.

Among the ancients, names expressed some peculiarity of shape, form, color or use, etc. The human female was named from her principal organ and maternal function: "The Khun or Kun, or Ghun, Gun; Khuni, Cunie, Ghuni, Guni, Goni; the Meeteer, Mątre, Womb-Man."

The German's name for mother, "Mutter," and the English name "Mot-Her," both came directly from the Egyptio-Hebrew "Mut-Khora," the great "goddess of chaos," the reputed celestial first cause of the whole inanimate and animate universe.

In the Bible we find evidences of her worship by the Jews, in the "Golden Mice" that were carried with the "ark" and placed in the temple, to soften this goddess' anger against the people.

As "Maut, Mut, Latona," her visible representative was the shrew-mouse or fieldmouse. She was one of the Jewish representatives of the one universal Deity—motherhood.

The goddesses of Assyria, Babylon and Egypt always went in pairs. Thus, "Is" and "Net Pe Is," or "Is Is and Netpes." The goddesses "Tuni and Atoum or Atum." The goddesses of the "East," or of new life and birth and increasing power; and the goddess of the "West" or transition from the organic to the inorganic form. Thus the "East or Front" symbolized the New Birth, Infancy, Increase. The "West" or "Back," symbolized the Decrease, waning of power, Death.

To set forth the idea of ever-present existence, the Egyptians used the first and third persons of the verb To Be, I Am, Is; and the better to visibly describe the unbegun-unending nature of their deity, they named the Goddess-Mother the "Is-Is."

The Greek colonists from ancient Egypt took the name of the Egyptian sun deity, "Athen," and added to it the character "A," and thus formed their deity, "AthenA." They copied their parents, in adding the latter "A" to their deity's name, thus to symbolize that "A-thien-A" was "without beginning or end," just as the Egyptians had symbolized in "Is-Is," the Mother deity of all Egypt.

The Hebrew word "Eden" signifies "pleasure." The word now read in the Hebrew as "Gan, Gani," is given in the English as "Garden." Originally, the marks in under the Hebrew characters signified o, u; and the word read as "Gon, Gun; Goni, Guni—the Womb-Man." From it we get "gynecology, gonorrhea," etc.

The Womb-Man was the Bible's "Pleasure Garden," man's "pleasure garden."

Now the Bible fable tells us that the ancient snake sat up and talked to the pleasure-garden woman and urged her to the exercise of her womanly functions and maternal duties.

But, why thus on the part of this snake?

The "Re Ligio" of the Orient was and still is, the "Re Ligio" of the Family. It was, it is, the only known mode of Salvation from the Death of family extinction. Therefore, the mythic Rachel (in Genesis, chap. 30, verse 1) cries to the equally mythic Jakob: "Give me children, or else I die." And in Timothy, chap. 2, verse 15, we read of the woman: "Notwithstanding, she shall be *saved in child-bearing.*"

Now, among the acients the snake was the "Genius Loci," and it was made his special duty to preside at the parental function and the birth of children.

One of the commonest of ancient pictures represents the ancient snake deity sitting on his tail and presiding at the birth of the young god, "Erickthonius."

This picture and story were the originals of the snake story of Genesis, chapter 3.

The Bible deities were not "gods."

The "Us" deities ("Olohim") of Genesis, chap. 3, vs. 22: ("behold the Atoum has became as one of us") were *goddesses.* They were the current deities of their own and of their past days. The so-called "Iudhs or Jews," were Assyrians, Armenians, Babylonians, Persians, Greeks, Arabs, etc. They were *a sect* of Nature worshipers, ancestor-worshipers, like all the remainder of the peoples of their times. They were not, they never had been, a people. *They were a sect only.* Hence their deity was the One Mother Deity of that age of these nations.

This deity's name might differ in different localities, but Sacred Motherhood was and is one, is universal, in time and place!

Now, what does the snake god say to the pleasure-garden woman?

In Genesis 3, verse 5, he says: "The olohim-gods know that in the day that ye *eat* thereof, then your eyes shall be opened and ye shall become as the gods."

But what "eyes" were those that were to be "opened" by this "eating of the fruit of the tree of lives?"

Among the ancient Greeks and Egyptians, "Ops, the eye," was the goddess of maternity, and the representative of the maternal organ and of the maternal functions.

Now we can see what "eyes" were to be opened for Atoum and her companion-khaiva ("Adam and Eve"), when they should "eat of the fruit of the tree of lives in the middle of the garden."

Well, they ate and their "eyes were opened," and this is the mythic "curse" that was put upon the woman because she ate "of the fruit of the tree of lives," chap. 3, verse 16.

"Unto the woman he (she) said: 'I will greatly multiply thy sorrow and thy conception; *in sorrow thou shalt bring forth children.*' "

Why this "curse?" Because the woman had *eaten* of their man's "*tree of lives.*" They had had their maternal "eyes opened" ("Ops"), etc., etc.

A baby? Of course! This was the only result to be expected from this marital feast in the "garden."

The Greeks celebrated a marriage by the man and woman eating of the "Love apple, Quince."

The Romans celebrated the marriage by "Con-farretio" or "Taking the cake." The pontifex, the man and the woman each and all took a piece of a small, round cake held by the priest Each and all ate of it, and the ceremony was completed by

the intermarital, physical act. To be "well wedded" the couple must be "well bedded." The "eating" was a symbolic expression of and for the intermarital act. In the Bible this is clearly set forth in the Book of Proverbs, chap. 30, verse 20, thus: "Such is the way of the *adulterous woman;* she *eateth* and *wipeth her mouth and saith, I have done no wickedness.*"

Who thus "*ate*" and "*wiped her mouth?*"

The "*Adulterous* woman."

We thus see that this Bible "*eating*" was a figurative expression for the intermarital, the intersexual act.

Now the snake-deity had promised the two women of Genesis 3d that they should become as the Olohim-Goddesses—"gods" of the English Bible. In verse 22 the "Jehovah of the Olohim" says: "Behold the Atoum has become as one of us."

Not until she became a mother was the Oriental woman held in repute. It is so today in Turkey. The Turkish *mother* enjoys legal rights and privileges unknown to the sterile, childless woman.

The Hindoos teach this very same Bible doctrine, that in the act and fact of the intermarital function and service the parties thereto "become gods of the holy circle."

"In the day that ye eat thereof, then ye shall become as the (Olohim) gods," says the snake (see verse No. 5).

"Behold, the Atoum has become as one of us," say the two goddesses of Genesis, chapters one and three (3d to 22 verses.)

Thus we see a perfect concurrence in the Family Service—worship of motherhood—as set forth in the Oriental writings of the Hindoos and those of ancient Assyrio-Egypt, now known as "the Bible."

The ancient "Re Ligo" or "Re Ligio" was the consecration and sanctification of the human intersexual relation. It was deemed the supreme act of human duty. Unlike the merely transient and brutal relation of concubinage, the "Re-Ligio *bound again,*" and continuously, this sacred pair in a lifelong family bond, the man to the woman; and hence he became the "Us-bound, Os-bound;" bound to the "Us, Os—womb."

The Womb-Man is the Savior ("Is-Os") of the human race!

3440 Twenty-Second Street.

[Written for the MEDICAL BRIEF.]

Yellow Fever.

BY REGINALD B. LEACH, M. D.,
St. Paul, Minn.

After consulting all newspapers and journals of the time, and my mail, since July, 1905, I have the honor to submit the enclosure for the perusal and consideration of your readers who were afforded the splendid opportunity, in your issue of last year, of studying the epidemic situation as it was in New Orleans (particularly) in 1905.

As you will see by the enclosed letter from Dr. Sisca, of Australia, I had the honor to congratulate him on his comprehension of similia as delineated in your July and August numbers of 1906. As the Doctor is a great admirer of yours, I have the honor to enclose his recent favor.

Trusting that the enclosed report may prove of use to you, and that THE MEDICAL BRIEF may continue in its liberal spirit and gather thereby a large family of the more progressive medics, I have the honor to remain your friend.

Dear Dr. Leach—

It is with real pleasure that I ask you to accept my best thanks for your very kind and otherwise highly interesting letter. I heartily join you in wishing that many of my allopathic confreres may have their eyes opened, to part, at least, of all the good there is in homeopathy; and if the notes which are being published in the BRIEF will be of some help in that direction, I shall be more than satisfied. All the credit, however, will be due to the Editor of the BRIEF, and I sincerely hope that his moral courage will eventually be appreciated and rewarded.

I also have to thank you for the clippings enclosed in your letter and the printed matter under separate cover. I find in the *Monthly Hom. Review*, London, April, '98, a report of your memorial to the Senate *re* arsenization as a preventive of cholera, but your clippings are the first intimation to me of your agitation in New Orleans about yellow fever. The reception you met with at the hand of the medical society was to be expected, but you did your duty nobly, and the praise of all lovers of fair play for your

manly conduct all through the affair is yours by right.

Good-bye for the present. With my best wishes for your welfare, I remain,

Fraternally yours,

N. SISCA, M. D.,

North Sydney, Australia.

Sept. 14, 1906.

RESULTS FROM THE EXHIBITION OF ARSENIZATION AS A PROPHYLACTIC OF YELLOW FEVER AT NEW ORLEANS, LA., AUGUST, SEPTEMBER, OCTOBER, 1905.

Population of New Orleans in 1905 (U. S. Census)	327,000
Immunes in New Orleans in 1905 (N. O. Board of Health), about..	16,000
Residents absent during epidemic (N. O. railway officials), about..	11,000
Arsenized persons in New Orleans, 1905 (N. O. *Lumber Journal*)	200,000
Non-protected non-immunes in New Orleans, 1905	100,000
Total Yellow Fever cases in New Orleans (1905 Government daily report)	3,396
Cases among non-protected, non-immunes (Government daily report)	3,391
Cases among two hundred thousand arsenized (Government daily report)	5
Deaths among cases in non-arsenized (Government daily report).	448
Deaths among cases in arsenized (Government daily report).	None

[Written for the MEDICAL BRIEF.]

The Mad Stone.

BY H. D. FAIR, M. D.,

Muncie, Ind.

The physician is often asked to give an opinion regarding the real or supposed virtues of this article to be found in a family here and there in nearly all lands, and not infrequently venerated as a fetich. It is not wise for the physician to ridicule the idea, neither should he encourage the belief that anything bordering on the miraculous attends its use.

The stone certainly possesses virtues, and its value would be enhanced if its use was understood, its limitations recognized and its method of action separated from all thoughts of magic and the superstitious awe which often surrounds it.

There is no particular variety of stone or substance which may be designated exclusively as the mad stone. I have seen many of them, so called, and no two were of exactly the same composition, geologically considered. Mad stones act on the same principle that a blotting paper does when absorbing ink, and there is nothing that makes a better one than baked pipe clay. A new clay pipe, pro curable for one cent at nearly any store where tobacco is sold, can not be excelled by any mad stone, no matter how great its reputation.

The action can be clearly demonstrated by placing a common dry red brick in contact with the margin of a puddle of water and noticing what capillary attraction will accomplish. Therefore, to be efficient, the only necessity is for the stone to be porous and have strong adhesive and absorbent qualities. Nothing mysterious about it. I have seen several that appear to be concretions, either vesical, renal or biliary, and were found in the bladder, kidney or liver of some animal; those taken from the deer, supposed to be the best.

When a person is bitten by a reptile or dog supposed to be mad and the porous stone applied to the wound, the blotting-paper action begins, and the blood, saliva from the mouth of the animal and whatever poison these fluids contain will naturally, by capillary attraction, be absorbed by and into the substance applied, no matter what name you may give it.

The saying that if a stone "sticks" the wound is poisonous, and if it does not take hold there is no venom present, is untrue. If the stone is clean and dry it will adhere when moisture is within reach till it becomes saturated. For instance, a new red brick will absorb one pint of water. After the venom has been taken into the circulation the mad stone is worthless; but as the victim is usually filled with whisky or alcohol at the same time the stone is being used, the spirits may counteract the effect of the poison.

One stone in a certain county of this State has a wide reputation, and makes a

good living for the family owning it. They never let it go out of their sight, and when the victim can not be taken to the stone one member of the family can be hired to take the stone to the victim. In addition to traveling expenses, they charge five dollars for the application and two dollars extra for each hour that the stone sticks. This stone is busy a large part of the time. Not long since the stone "held" to a man's leg for over one hundred hours, yet the man died. His life could have been saved if dependence had not been placed entirely in the stone.

It is true that most of the deaths from the bites of dogs supposed to be victims of rabies are due to fright, and even when the dog is not diseased in any way the mind can be so worked up to the limit of tension on account of stories told by foolish friends and neighbors, who are never lacking, that often fatal convulsions are the result. Hysteria has more than once been mistaken for hydrophobia. True hydrophobia is almost unknown in the human race. Some experienced physicians even go so far as to deny its existence.

[Written for the MEDICAL BRIEF.]

Malarial Fever.

BY JAMES W. DAVIS, M. D.,

Allons, Tenn,

Probably some of the BRIEF family have never tried aconite, digitalis, and gelsemium in malarial troubles; if not, study them a little and give them a trial in your next case. These remedies being poisonous necessarily require some caution in their administration, but when the temperature is 101½° to 103° F., it is time to use the following:

℞ Tinct. Digitalis ..... ½ ounce.
Tinct. Aconite.....5 minims.
Tinct. Gelsemium .....5 minims.
Aquæ.....3 ounces.
M. Sig.: One tablespoonful every four hours.

Bathe with tepid water, containing sodium carbonate, once a day, while temperature is high. Calomel, in one-grain doses, for the first three days, until the tongue becomes clean.

Digitalis increases the circulation, which is almost always lacking in febrile troubles, and is also a heart stimulant.

Gelsemium is a sedative, and must not be given when there are cardiac troubles.

Aconite is cardiac and nerve sedative, and must be administered with caution.

I have used these remedies in persons of tender years, have lost as few cases as anyone, and have them on their feet in half the time my brother physicians do who use other methods.

I do not pretend to say that these drugs are specific in breaking up fever, but I do say that they are specific in their action, and must be given with judgment.

It is astonishing to watch the effect of gelsemium in puerperal fever. I usually give one drop every three hours until patient becomes quiet and cool. I also find it of much value in neuralgia and sciatic affections.

If any brother physician has not given these remedies a trial, I hope he will do so, and then report his experience in the BRIEF, as I know he will have good results.

I wish success to the BRIEF and its many thousands of subscribers.

[Written for the MEDICAL BRIEF.]

A Valuable Alterative Compound.

BY J. A. BURNETT, M. D.,

Dean Spring, Ark.

The following is a valuable alterative compound in most all cases where an alterative is indicated:

℞ Potassium Iodide.....6 drachms.
Fld. Ext. Phytolacca..2 drachms.
Fld. Ext. Echinacea..1½ ounces.
Simple Syrup, q. s....6 ounces.

M. Sig.: Dose, one drachm three times a day.

Many obscure cases that do not readily yield to the seemingly indicated remedy can soon be relieved with this compound. In all cases of chronic sore throat, no matter what the cause is, this remedy is useful. Many forms of skin diseases will readily yield to it. Chronic malaria will soon give way under its action when an antiperiodic is used before a few chill times, in order to keep off the paroxysms, and the liver first being stimulated by a good cholagogue. It is of value for enlargement of the spleen, tonsils, ovaries, lymphatic glands, as well as various other

enlargements. It is an antiscrofulous remedy and systemic antiseptic, a powerful alterative and reconstructant. Can be used in all diseases due to fatty metabolism and retrograde tissue change and the strumous diatheses. Weakly, undeveloped children improve under its use, and weakly, undeveloped girls at the age of puberty are greatly improved or cured by its use.

When used for enlargement of glands, its value is usually enhanced if alternated with the biniodide of mercury, and the same holds good when used for various skin diseases and syphilis. Give this valuable alterative, antiscorbutic, antisyphilitic, antiseptic and reconstructant compound a trial and be pleased with the results.

[Written for the MEDICAL BRIEF.]

Diphtheritic Serum.

BY N. D. TOBEY, M. D.,

Salina, Kansas.

I see in July BRIEF, page 444, an article by Dr. Rose on the antitoxin question, and find that the savants of Germany are taking one and the other by the ears, and German savants have the right to speak *ex-cathedra* on bugs dangerous to the human race. It is a little refreshing to see that they aim to place a new song in our mouths so that we shall sing and whistle the same at their diction, but it soon becomes ridiculous to the thinking medical mind.

If the treatment is given according to the bug theory and the patient elects to die, it is too grave a subject to blame the physician for injecting antitoxin for the trouble, although it does not seem to be indicated. If the patient dies it is no fault of the treatment—only because the patient was too stubborn to live, and the consolation of friends is that he was taken away by devouring bugs, and our serum too late in arriving to save the patient. The lateness of arrival out in the country and remote places is often the apology for its neglect to perform what is claimed for it. From the fact that old serum is to be returned shows that freshness is an essential quality, and even the preservatives can not keep it active for any length of time.

No doubting Thomas dares to venture the suggestion that all that is claimed for the bug theory and their destruction by serums can be proven by results.

We are surely living in a period of great achievements and rapid transit, yet our transit is so rapid that we are dumped off at stations for which we purchased no ticket.

[Written for the MEDICAL BRIEF.]

Sleeping Directions.

BY U. SMITH, M. D.,

Sacramento, Cal.

For all ages, whether two or more in bed, follow the example of hogs, with bodies in reversed directions; then the lung emanations are never inhaled by either. Children should be early taught this, for sanitary reasons; the married should be very observant in this particular. Tubercular and glandular diseases are often communicated by inhalations.

Further, the saliva accumulations during the night are more or less poisonous; therefore, the necessity of a thorough mouth-cleansing before lips are permitted to join in loving friendship.

COUGH.

℞ Syrup Tolu..... 3 ounces.
Misc. Acacia..... 3 ounces.
Tinct. Hyoscyamus..... 1 ounce.
Ext. Licorice Powder..... 1 drachm.
Morphia Sulph..... 4 grains.
Hydrocyanic Acid.....30 grains.

M. Sig.: One teaspoonful three or four times a day.

SCIATICA.

One teacup of celery seed tea just before going to bed. To make: Three or four teaspoonfuls of seed in two cups of water; simmer to one. Sweeten to taste. Avoid acids.

DIARRHEA.

℞ Tinct. Camphor.....1 ounce.
Tinct. Opii.....1 ounce.
Tinct. Rhubarb .....1 ounce.

M. Sig.: One teaspoonful every twenty minutes till relieved, let patient drink all cold water desired. Apply woolen cloths, hot water and ammonia to abdomen. Splendid children's remedy.

[Written for the MEDICAL BRIEF.]

State Board Examination Questions, Michigan State Board of Registration in Medicine, October 9, 10, 11, 1906.

ANATOMY.

1. Describe the chief processes and general characteristics of the humerus.
2. What are the muscles of the forearm?
3. Describe the femoral artery.
4. Describe the collateral circulation after ligature of the common carotid artery.
5. Mention the principal convolutions of the brain. What are the ventricles of the brain?
6. What are the cranial nerves, and what do they supply?
7. Name the subdivisions of the alimentary tract and the accessory organs.
8. What are the lobes and fissures of the liver? Describe the gall-bladder.
9. What is the trigone vesical?
10. What are the muscles of the tympanum? What is the nerve supply to the tympanum?

PHYSIOLOGY.

1. Metabolism. Define and give classification.
2. When can a given amount of starch be said to have been completely digested?
3. Mention and give function of some one large system of veins beginning and ending in capillaries.
4. Give function of liver other than the secretion of bile—and mention varieties of blood found within the organ.
5. Blood. Trace its course through the heart and lungs, beginning at the right auricle. Describe the changes that take place.
6. Describe the function of the stomach.
7. Name all the valveless veins, and state why they have no valves.
8. Give function of kidneys.
9. State function of sympathetic nervous system.
10. Mention four elementary principles essential to health.

HISTOLOGY AND EMBRYOLOGY.

1. Name and describe the various forms of epithelial tissue.
2. Name the elementary tissues of special function.
3. Define and describe the lymphatic circulation.
4. Describe the formation and growth of the nails.
5. Give the structure of Peyer's patches.

CHEMISTRY AND TOXICOLOGY.

1. Define acid and base.
2. What is meant by "valence"? What is the valence of Ca., Na., and K.?
3. How is ammonia prepared?
4. Define the term anhydride.
5. Classify ferments found in the body. Name one member of each class.
6. Give the composition of the gastric juice. Give tests.
7. Give symptoms and treatment of poisoning from bichloride of mercury.
8. Describe opium poisoning. Distinguish between opium and alcoholic poisoning.
9. Describe cocaine poisoning.
10. Give symptoms of poisoning from the continuous use of acetanilide. Treatment.

BACTERIOLOGY.

1. Define bacteria; state methods for recognition, cultivation, and the conditions most favorable for growth, and the different ways of entering the body to produce disease.
2. Give details for the examination of sputum for the tubercle bacillus.
3. Describe method for determining the bacillus of tetanus, and state origin, form, properties and growth.
4. What are ptomains, toxins, toxoids? What is an antitoxin—an antitoxic unit?
5. How would you make a bacteriological examination in suspected diphtheria? State dosage of diphtheritic antitoxin in pharyngeal and laryngeal cases, and in the different stages: also dosage for immunizing or prophylactic purposes.

SURGERY.

1. Local anesthesia. Describe agents and methods.
2. What is sepsis, giving symptoms and stages?
3. Describe the different amputations at the ankle joint.
4. Describe inguinal colostomy, giving indications for same.
5. Give differential diagnosis of dislocation of the femur.
6. Describe the complications of fracture, with treatment.
7. Describe osteomyelitis, giving etiology, differential diagnosis, sequelæ, treatment.
8. Give the surgical consideration of gastric ulcer.
9. Give diagnosis, cause, and surgical treatment of calculus.
10. Give diagnosis and surgical resources of intestinal obstruction.

GYNECOLOGY.

1. Describe the pathological effects caused by laceration of cervix, and all reflex disturbances therefrom.
2. What pathological conditions follow lacerated perineum; their immediate and remote manifestations, and, if operation be required, how soon should it be made, if not immediately following the injury?

3. What is vaginismus, its cause and treatment?

4. What are the sources of streptococci poisoning in the puerperium, and in what per cent of such cases does it occur? How should the local and constitutional manifestations of the disease be treated?

5. What is cystocele? Give symptoms and treatment.

OBSTETRICS.

1. External pelvimetry. Give procedure of taking external measurement, and enumerate the various normal diameters.

2. Tuberculosis. What influence does gestation have on the course of this disease?

3. Mention regulations for diet during normal pregnancy.

4. Give treatment of asphyxia of newly born.

5. Funicular presentation. Give etiology, diagnosis and treatment.

PATHOLOGY.

1. Hyaline degeneration. Give its etiology and seats.

2. What is metabolism in diabetes?

3. Describe the lesions produced by excessive cold and heat.

4. Describe hypertrophy, and give its etiology and pathological anatomy.

5. Describe briefly the general structure of tumors, and discuss their classification.

6. Describe and give the pathology of congenital atelectasis.

7. Distinguish between fibrinous, catarrhal, purulent, and fibrous pneumonia.

8. Give pathology of chronic salpingitis.

9. Differentiate between caries and necrosis, giving etiology and pathological anatomy of the latter.

10. What is osteomalacia?

PRACTICE OF MEDICINE.

1. What are the remote effects of syphilis of the nervous system?

2. Mention some of the more common diseases of the heart; their diagnosis, prognosis, and treatment.

3. Describe pleurisy, both serous and purulent; diagnosis.

4. What is the prognosis in serous pleurisy?

5. What is the prognosis in purulent pleurisy?

8. Give the dietetic management of acute pneumonia, gastrointestinal indigestion, and chronic parenchymatous nephritis.

6. What are the symptoms in gastric ulcer? Differentiate from duodenal ulcer.

7. Describe the characteristic physiognomy in typhoid fever, tetanus and exophthalmic goiter.

9. What is the clinical difference between diphtheria and streptococcic infection of the throat?

10. The cause and treatment of scurvy?

EYE, EAR, NOSE AND THROAT.

1. What is trachoma; its cause; symptoms; course; prognosis; medical and operative treatment?

2. Describe the Argyll-Robertson pupil, and give its significance.

3. Describe the organs of the nerve supply of the function of hearing.

4. What is chronic nasal catarrh—its pathological anatomy, and treatment?

5. Describe the larynx and its cartilages—the laryngeal ligaments and the vocal cords.

MEDICAL JURISPRUDENCE.

1. What do you understand by the term Medical Jurisprudence?

2. A dead body is discovered in some sequestered spot, with or without marks of external violence. How would you proceed to make an examination of said body?

3. Differentiate between wounds inflicted before death, and those inflicted after death.

4. Define insanity from a medicolegal standpoint.

5. What constitutes malpractice?

HYGIENE AND PUBLIC HEALTH LAWS.

1. Define the term hygiene as related to the science of medcine, and state what you understand by health laws.

2. What diseases may develop from the use of impurities in water? Impurities in milk?

3. What deleterious gases accumulate in an imperfectly ventilated school room, and state amount of fresh air required per minute for each child; also state evil effects from the inhalation of air rendered impure by respiration.

4. Name most improved methods of disinfecting living rooms. State what precautions should be observed in typhoid fever, and with regard to the sputum of tubercular patients.

5. What diseases must be reported to the board of health? State fully the duties of the physician as required by our statutes.

MATERIA MEDICA AND THERAPEUTICS.

1. Explain what is meant by empirical use of remedies and their intelligent employment, and give examples.

2. Describe some of the so-called remedies much in vogue during the past fifty years which are now deemed worthless, if not harmful in certain cases.

3. Describe hypnotics, and the two classes into which they may be divided. Give examples.

4. What are anthelmintics? Vermifuges? Vermicides? What are the parasites against which they are directed?

5. What are the physical properties of amyl nitrite? Give its effects and therapeutics.

Book Notices.

AMERICAN PRACTICE OF SURGERY. A Complete System of the Science and Art of Surgery. By Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M. D., and Albert H. Buck, M. D., of New York City. Complete in Eight Volumes. Profusely Illustrated. Vol. I. now ready. New York: William Wood & Co., Publishers. Price, per volume, Muslin, $7.00; Brown Sheep, $8.00; Half Morocco, $8.00.

American practice of surgery differs so greatly from the practice in foreign countries that a work that is thoroughly American should command the attention of all who know how the practice is carried on to-day by progressive methods that are enhanced by American ideas; the peer of all nations in medical and surgical science. It is only within a decade that America has made the practice of surgery the absolute science that we find at the present writing. In this work we have a teacher and an author of wide experience to guide us, and a list of writers of wide reputation to contribute the articles of which this great work is to be composed. The material contained in this work will be entirely original—written for this work alone—and, naturally, embracing much that has never before been published. No foreign writers have been invited to take part in the work, therefore it is purely American. All practitioners need an American work on surgery, and, therefore, should secure this one.

RHYTHMOTHERAPY. A Discussion of the Physiologic Basis and Therapeutic Potency of Mechano-Vital Vibration to Which is Added a Dictionary of Diseases, with Suggestions as to the Technic of Vibratory Therapeutics. With Illustrations. By Samuel S. Wallian, A. M., M. D., President American Medico-Pharmaceutical League, ex-President Medical Association of Northern New York, Member New York State and County Medical Societies, Fellow of the American Electro-Therapeutic Association, Member Medico-Legal Society, Associate Editor Medico-Pharmaceutical Journal, Etc. Chicago: The Ouellette Press.

The busy physician, who is obliged to read as he runs, will appreciate that "Rhythm is the Underlying Law of the Universe;" that the "Music of the Spheres is as Real and Demonstrable as any Law of Mathematics;" that "The Morning Stars have been Singing Together since the Primal Dawn;" that "Life is an Incessant Succession of Rhythmic Reiteration;" that "Disease is the Opening of a Discordant Stop;" that "Death is a Cessation of Vibrant Impulse (It Shuts the Organ Manual);" that "Fate is the Architect of the Organ;" that "The 'Voice of Nature' is the Diapason of the Infinite;" that "Music is Vibrant Harmony—It is Love Struggling for a Language;" that "Love is Music that has Found a Language;" that "Hate is the Clash of Antagonistic Vibrations." And that a work along the lines of the subject of this new therapeutic measure has a deep value to the student of science, as well as the general practitioner. It is a work that will fill in a niche in your leisure time, and you will be the better for the reading.

A TEXT-BOOK OF HUMAN PHYSIOLOGY. By Dr. Robert Tigerstedt, Professor of Physiology in the University of Helsingfors, Finland. Translated from the Third German Edition, and Edited by John R. Murlin, A. M., Ph. D., Assistant Professor of Physiology in the University and Bellevue Hospital Medical College, New York City. With an Introduction to the English Edition by Professor Graham Lusk, Ph. D., F. R. S. (Edin.). New York and London: D. Appleton & Co. Price, $4.00.

The author describes, in this work, in a very lucid and explanatory way, the science of life and the study of the functions of living organisms, also the grand study of the normal, as distinguished from the pathological vital phenomena. The author claims that the discoveries made in the realms of practical medicine, of experimental pathology, and of pharmacology, which, in many respects, are so full of significance for the processes of the body, are, therefore, for the most part passed by, at a sacrifice for what some consider more important facts. There are so many good things in this work that we almost forgot to lay stress on the great number of excellent illustrations that adorn its pages. When illustrations are made accurate and explanatory, it is of the greatest importance to the elucidation of

the text. Altogether, this translation of Tigerstedt's text-book of physiology is, to our notion, the most complete and most broadly conceived one for its size in any language.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelly, A. M., M. D., Philadelphia, with the collaboration of Wm. Osler, M. D., Oxford; John H. Musser, M. D., Philadelphia; Jas. Stewart, M. D., Montreal; John B. Murphy, M. D., Chicago; A. McPhedran, M. D., Toronto, Canada; John G. Clark, M. D., Philadelphia; J. W. Ballantyne, M. D., Edinburgh; Edmund Landolt, M. D., Paris; Thomas M. Rotch, M. D., Boston; James J. Walsh, M. D., New York; John Harold, M. D., London; Richard Kretz, M. D., Vienna; with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. III., Sixteenth Series, 1906. Philadelphia: J. B. Lippincott Co., Publishers. Cloth, $2.00.

Are you a subscriber to the International Clinics? If not, your library is not complete, and you are not looking for the best in medical literature. The best medical lights of the profession are contributors to the pages of this work, as you can plainly see by a glance at the above. It contains some of the best articles and illustrations of any work that comes to our table; therefore, it deserves just such mention as an unbiased mind should give it. Give it a thought, and rely on our judgment.

THE PHANTOM OF THE POLES. By William Reed. New York: Walter S. Rockey Company. Price, $1.50.

At the present writing Peary has arrived at the nearest point to the North Pole, yet there seems to be some reason why he could not *absolutely* reach it. This work gives an idea that should any of the adventurers reach the pole they would find an opening into the center of the earth, and find continents, oceans and rivers, and, perhaps, a class of people yet unknown to surface residents. As no one has yet been able to reach either pole, why not conceive of a continent on the inner surface, as well as the outer? The question is open to the discoverers, and why is it so difficult to get the facts? It seems that the best talent, the most courageous people that inhabit our outer globe, have used their best endeavors to discover the poles, yet they signally fail to accomplish it. Why?

The book is worth reading, as it gives you ideas on a mooted question—the kind of ideas we are looking for.

A TEXT-BOOK OF HISTOLOGY. By Frederick R. Bailey, A. M., M. D., Adjunct Professor of Normal Histology, College of Physicians and Surgeons, Medical Department, Columbia University, New York City. Second and Revised Edition. Profusely Illustrated. New York: William Wood & Company. Price, $3.00.

The principal aim of the writer has been to give to the student of medicine a text-book of histology for use in connection with laboratory instruction, and especially to furnish to the instructor of histology a standard manual for classroom teaching. To obtain these two objects the text has been made as concise as possible, without sacrificing clearness, and the more essential elements have been emphasized sufficiently to make them stand out somewhat from the details which necessarily accompany them. Dr. Bailey's long experience has most eminently fitted him for the task of writing such a work. We commend it to all advanced thinkers on the subject.

BUFF. A Tale for the Thoughtful. By a Physiopath. Boston: Little, Brown & Co., Publishers. Price, $1.00.

The title of this work would suggest the idea that it is a fictitious novel, but far from it is its teaching, as it is a work that views life, medical theories, and practice, from the standpoint of nature—it shows a disposition that the methods of nature, *per se*, are superior to man's methods. A careful diet and plenty of fresh air is the restorative power of nature, as shown by a careful reading of this work. The author aims to furnish a correct basis for obtaining a perfect physical endowment, and what could be best suited for the thoughtful reader in the prevention and cure of disease in all its stages.

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Editorial.

Don't Whine.

If a mining promoter sells you stock in some mining property, of which you know nothing regarding the actual value, and the stock turns out to be worthless, with the result that you lose your money, don't whine—but remember next time to find out something definite as to the value of what you are asked to buy. In the same way, if a druggist sells you an imitation of some standard proprietary remedy, and it fails to accomplish what you have come to expect from the original preparation, with the result that you lose your patient, don't whine—but learn your lesson with good grace, and resolve not to be gold-bricked in the future.

A Mistake.

We have before us a circular issued by the St. Louis Retail Druggists' Association, in which doctors are told not to prescribe proprietary remedies; a pamphlet is inclosed, giving a number of imitation preparations for the use of physicians in prescribing. It is our belief that a mistake has been made in this matter, as doctors will surely resent this impertinence on the part of the druggists, in telling them what to use and what not to use. The formulas sent with this circular are intended to be substitutes for long-established proprietary preparations, whose value has been proven during years of use by the profession. Now, the Editor of the BRIEF was a retail druggist for seven years, and from his experience in the business, together with what he learned as a country doctor, a village doctor, and a city doctor, he knows it is an impossibility for the retail druggist to successfully imitate the standard proprietary preparations. Such an attempt is purely guesswork, and the result is not "the same thing" and "just as good" as the original; the chief objection being that the substitute does not accomplish

the results the physician has come to confidently expect from the original remedy. The doctor's first duty is to his patient, not to the druggist, and we believe he will continue to prescribe what he has found to yield the best results, regardless of the edicts of self-appointed instructors. Our idea is that this is a scheme on the part of certain druggists to trick their competitors into thinking it unnecessary to keep a full stock of the well-known proprietaries regularly prescribed by physicians. Knowing that good doctors will refuse substitution on the remedies ordered for their patients, this clique of druggists are evidently counting on increasing their business by means of this stratagem. They well know it is the height of presumption for a druggist or anyone else to dictate to the doctor what drugs he shall use.

The Man of Independent Mind.

The business of the physician is to heal the sick. When he is called into a case, that should be his only aim and purpose, to accomplish which, if he is a sincere and practical man, he will use those agents which he considers most effective for the end in view. And it does not make any difference to him whether they are simple home-made remedies or are intricate products of chemistry.

One can not withhold admiration from the patient worker who, after long and laborious search, has evolved some new chemical, but the amount of labor or skill expended in its production bears no relation to its remedial value. But right here is where the profession is often led astray. A new discovery is made. Some new chemical is brought into existence. And the very fact of novelty lends to it an interest out of all proportion, and sometimes, without regard to its value as a medicine. It is "featured" in the medical and the lay press. Medical societies discuss it at their meetings, and members detail their experiences with it. The reports of these experiences are, from the nature of the case, in most instances favorable, for the minds of the experimenters were prepossessed in favor of the remedy before they began to use it, and hence they are easy to convince. They write papers for the medical journals about it, and these papers are copied into other journals, and so it goes. There is so much talk about it, that more and more physicians get to using it, and in a short time it comes into almost general use—it gets, in fact, to be a medical fad, and without its having ever been fairly and thoroughly tested. And all because its discoverer or creator happened to be a man of high-sounding reputation, or because the big chemical house in whose laboratory it was evolved was shrewd enough to "work" the profession and the medical journals under the guise of science. Admiration for art and skill has blinded the judgment to the one practical question: *Is it a good remedy?*

We hear a good deal about ethics these days. We are told that it is not ethical to do this, that or the other. That we must not use one remedy because some pretender has pronounced it unethical. That we *must* use some other because it *is* ethical. Now, ethics relates to morality, and, as such, it should influence and direct our every act. But it can have nothing whatever to do with the selection of a remedy. *This latter is a practical question.* It can not be decided according to any theory, but only on proof *supplied by facts.* If the evidence proves that it possesses certain medicinal virtues, that should settle the question. And so it *does* with the man of *independent mind. He* laughs at the vagaries of the pretenders. He does not care a fig if Doctor So-and-So says a certain remedy or method of treatment is not ethical, or if some other doctor says it *is* ethical, but he asks himself these simple questions: *Will it do the work I want it to do? Will it benefit my sick patient?* And after deciding these questions, according to the lights before him, he uses the remedy or discards it, and without regard as to whether his action meets the approbation or the censure of some other physician who has wrapped about himself the mantel of self-importance and presumes on his right to dictate to those whom, in his egotism, he *imagines* are his social and professional inferiors. Bobby Burns was right when he said:

> The man of independent mind,
> He's king of men for a' that.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
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The MEDICAL BRIEF has the largest paid circulation of any medical journal published anywhere.

[Written for the MEDICAL BRIEF.]

Some Practical Hints in Prescription Writing.

BY J. S. CASSIDY, A. M., M. D., D. D. S.,
Professor of Chemistry and Materia Medica in the Ohio College of Dental Surgery.
Covington, Ky.

Materia medica is that part of therapeutics which includes the study of the origin, physical and chemical nature, therapeutic and toxic effects, local and general, of materials employed for the cure, alleviation, or prevention of disease.

Although it is not often incumbent on the dentist to prescribe medicines for internal administration, it is proper that he should know the general effects, dosage, incompatibles and antidotes, when so exhibited, of those drugs which he uses in his practice as local agents, inasmuch as a majority of them are active poisons.

By knowing these effects, he can make judicious selection and combination of materials for any prescription that, in his judgment, will best suit the case in hand. He would not, for instance, order a combination of any soluble chloride with silver nitrate, or any vegetable astringent with per salts of iron; or use, even topically, excessive quantities of arsenic, or tincture of aconite root, etc.

The art of writing proper prescriptions is a serious labor to the average student. If we could prevail upon him to discard completely the signs and symbols of the old systems of weights and measures, and adopt the metric system, exclusively, he would find the task much easier; and if, as occasionally happens, he should be deficient in knowledge of the Latin language, he should take courage and realize that very few Latin phrases are needed in prescribing.

In writing a prescription containing a number of substances it is proper to place the most important article in the combination, first, as the basis; the adjuvans, or assistant to the base, next; the corrective (if the first two have certain objectionable properties—as taste or smell—) comes next; and, finally, the vehicle to give form and elegance to the whole.

In writing prescriptions, according to the metric system, the only signs needed are Gm. and f. Gm., and fractions of them are stated decimally, in the same way that we write our divisions of Federal money. Both systems of weights and measures, however, should never be used in the same prescription, as is sometimes done.

The percentage of solutions can be made in prescribing according to the metric system, taking the gram as the unit of weight, and the f. gram as the unit of measure.

Carelessness, in chemical nomenclature, leads to many mistakes in prescription writing, as a mere change in termination of names, like "mercuric" and "mercurous," as the one, would indicate the presence of corrosive sublimate, etc., and the other would be practically harmless. These two illustrations are sufficient to

indicate the danger of using chemical names.

One more important point: The importance of writing prescriptions in a legible hand, and unless this is done the prescription may not be accurately filled. Making all due allowance for haste, etc., there is no reason why all prescriptions should not be written in a good, readable hand.

734 Madison Avenue.

[Written for the MEDICAL BRIEF.]

Some Notes on the Practical Treatment of Diabetes Mellitus.

BY E. R. HEATH, M. A., M. D., F. R. C. S.,

Professor of Pharmacy in the Eclectic Medical University of Kansas City.
Kansas City, Mo.

The first thing to do in the treatment of diabetes is to keep up the strength of the patient. There is no special diet except to restrain patients from using what they themselves (from experience) know will injure them. In the more serious cases of diabetes where there is grangrene or carbuncles, the intense thirst can be relieved at once by giving cubes of granulated sugar or pieces of maple sugar every half hour; push it. The general lesions in diabetes is a lesion in the floor of the fourth ventricle. That is the starting point, or origin, of the splanchnic nerve, and an irritation at that point will produce an extra flow of urine. There are conditions where the pneumogastric nerve is so irritated by this irritation in the brain that the digestion is interfered with and uric acid is formed in large quantities. That also can be treated by forcing the carbohydrates. The liver and portal system often are almost paralyzed, and in the analysis of the urine the guide to the condition of the diabetic patient is the amount of phosphates in the urine. In severe cases the phosphates entirely leave the urine, and as soon as they can be brought back the patient begins to improve.

The amount of sugar in the urine is of no consequence. It is simply a phenomenon, a symptom, that is all. Whenever a disturbance of the portal system occurs, it also communicates itself to the pancreas. At those times the pancreas will be enlarged and the secretions that are thrown into the intestines by the liver and the pancreas are intensely corrosive acid. To neutralize these conditions we require remedies for the brain rather than the digestive organs.

To test the urine with litmus paper does not reveal its condition, but by administering the permanganate of potash solution a few drops of urine will bleach the color almost immediately, although the blue litmus paper will not show acid reaction.

One of the best remedies in this condition is phosphoric acid. I mean homeopathic phosphoric acid; the use of uranium nitrite is limited to a very few cases, and only useful where the uric acid is intensely prominent. Calomel and remedies to start the bile oftentimes will break up some cases of diabetes. However, one must be very careful not to use too much cathartic. In cases of gangrene the wounds should be dressed with powdered red Peruvian bark; one grain capsules of red Peruvian bark is also useful to take internally at that time.

Where the rheumatic pains are excessive in cases of severe diabetes, rhus aromatica is the best remedy. There are some twenty conditions of diabetes mellitus. Certain skin diseases will produce it, and, consequently, remedies to relieve that condition may be useful. Some cases can be directly traced to vaccination. Among the starchy foods potatoes, except raised in a cold country like Colorado, are very harmful in diabetes; they can take other starchy foods without any reserve whatever and to the alvantage of the patient.

When patients have an odor of acetone or diacetic acid they are in danger of coma, and then we must press the carbohydrates; but good cider vinegar made into vinegarade just after meals will help the digestion and break up the formation of diacetic acid and acetone. When the acetone is very prominent and marked, hydriotic acid will break up the acetone condition and change it to an aldehyde, and that existing, forms acetic acid, which is normal digestion.

Rialto Building.

[Written for the MEDICAL BRIEF.]

Syphilitic Diseases of the Nervous System.

BY GEORGE OGILVIE, B. SC., M. B. (EDIN.), M. R. C. P. (LOND.),

Chevalier de la Legion d'honneur; Senior Physician to the French Hospital, London; and to the Hospital for Epilepsy and Paralysis, London. London, England.

I.

The division of syphilitic symptoms into primary, secondary, and tertiary, is a legacy left by Ricord of very doubtful value, as it has been a constant source of confusion, and a cause of much dogmatic and arbitrary handling of clinical facts. The principle upon which the distinction was made by Ricord—that only the primary stage was infectious by contact, the secondary only infectious by heredity, and the tertiary not infectious at all—has been given up by every one. The same fate has befallen the other nosological difference introduced by him between secondary and tertiary symptoms, viz., that the former only affected skin, mucous membranes, eyes and scrotum, while the latter attacked the inner organs. Those who, after Ricord, have tried to put this division of syphilitic symptoms on a different footing, do not seem to have been happier than he was. The pathological scheme (Virchow) of dividing the symptoms into irritative and neoplastic, is no better than the clinical scheme (Zeissl) of dividing them into papular and gummatous; again, the division of symptoms (Auspitz) into acute and chronic, has as many shortcomings as that (Reder) into exanthematous and metastatic. Others have tried to avoid these difficulties by placing upon all these modes of dividing the symptoms of syphilis a chronological meaning, corresponding to earlier and later, and limiting the earlier period to from two to three years after the appearance of the primary sore. Those who seem to rely upon time only as a distinction (Finger) have, however, always introduced, in addition, some clinical characteristics of the two sets of symptoms following the primary sore, such as benignity, spontaneous recovery, universality, symmetry, etc., and, consequently, we are told that the secondary stage may extend considerably beyond the time arbitrarily fixed upon as its limit, and we are also told that the latest (tertiary) symptoms not unfrequently appear during the earlier (secondary) stage. In fact, with regard to some "tertiary" lesions, we are led to the paradox that they are most common in the "secondary" stage.

Not one of these different divisions or classifications is fully satisfactory, still each of them contains a kernel of truth. They all aim at giving expression to an undeniable fact, that in the ordinary course of syphilis a clinical difference exists between those symptoms which accompany and closely follow the eruptive stage, and those which, after a period of latency, appear later on.

As a consequence of the infected state of the blood, Hutchinson teaches us that secondary symptoms are almost always symmetrical, while in the tertiary stage, the virus having ceased to exist in the blood, we ought not to expect the phenomena to be either general or symmetrical. Later, I shall have to refer again to the fact that the nervous affections show no more tendency to symmetry during one stage than during the other. Here, however, I should like to draw attention to the odd consequences to which this forced classification of facts must necessarily lead. Interstitial keratitis in hereditary syphilis is, according to Hutchinson, in the end always symmetrical, as well as the deafness frequently associated with it. Both these affections appear, as a rule, at the age of puberty, but occasionally much later. Still, their constant symmetry seems, according to Hutchinson, to prove that they really belong to the secondary group. Consequently, we would have here a secondary period, extending over considerably more than ten years. No one will maintain that during this period hereditary syphilis remains, either infectious or transmittable, and still the secondary stage was defined as being that during which the blood is infected, and as coincident with that during which contagion and hereditary transmissions are possible. Here, theory and fact come into conflict, and in trying to stretch the latter so as to fit the former, a

contradiction arises which can not be solved.

Perhaps, in no chapter of our knowledge of syphilis has this confusion been more apparent than in the study of syphilitic diseases of the nervous system. It is perfectly true that in a great many, even, of our modern text-books the teaching is that they are the latest manifestations of the disease, and that the rare exceptions are to be regarded as precocious cases. This erroneous doctrine is not due to want of valuable investigations to prove its fallacy, but to the difficulty of getting rid of heresies once accepted as facts and covered by Ricord's great name. In fact, during the last quarter of a century numerous observers have shown that the first two years after the infection exhibit an extraordinary predominance, as far as the development of nervous affections is concerned, over any similar period during the whole course of the disease. They prove that nearly one-half of all the nervous affections met with in syphilis appear during the first two years. I am not speaking here of casual observations of early nerve disease —observations which might be traced as far back as forty years ago and more, and which have given rise to the teaching of "precocious" nervous symptoms—but of systematic statistical compilations of observations made by different men at all stages of the disease. Only these latter are of importance, as they enable us to form a definite idea as to the place which a single symptom holds in the picture of the disease.

For a long time syphilis of the nervous system has been considered the prototype of what is called tertiary syphilis. But the inadequacy of the time-sanctioned division of syphilitic lesions into secondaries and tertiaries is, perhaps, nowhere more apparent than when applied to nervous diseases. Originally, the division was evidently made from a purely chronological point of view, and the difference between secondary and tertiary symptoms amounted to nothing more than a distinction between earlier and later manifestations of the disease. But Ricord already had, with this chronological principle, interwoven an anatomical, or rather, a topographical one. Affections of the skin, throat, pharynx and nose, iritis, carcocele, etc., were, according to him, counted secondaries; and affections of the bones, the muscles, the liver, the brain, etc., tertiaries. Virchow, justly exposing the weakness of this ambiguous classification, replaced Ricord's anatomical point by a pathological one. Not the seat of its lesion, but its nature, became with him the decisive moment. The inflammatory processes became the secondaries, the gummatous the tertiaries. Such a division was a decided progress, compared with its predecessor. But, in application to clinical experience, it also proved a procrustean bed, into which the unwieldy form of the disease can not be forced without considerable distortion of facts. For not only the inflammatory and gummatous changes are frequently combined, but also some of the latest affections of the nervous system may be purely inflammatory, while the gumma may appear at the very onset of the disease. I will not relate other attempts at classification which have been made in order to avoid the shortcomings of those just mentioned. None of them have found such a general acceptance as these two, and none have succeeded in putting the multiplicity and irregularity of the manifestations of this "most regular" disease upon a more satisfactory footing or basis. The principal defect of the usual classification is its hybrid nature—the intermixture of two or even more distinct principles of division. But while aware of the unsatisfactory and inadequate character of this generally accepted classification, we are looking out in vain for something better. If we consider what we understand by the term tertiary, as distinct from secondary, we will find that by the latter we think of some early inflammatory infection of the skin or mucous membrane, while the former brings into one's mind some late gummatous affections of the bone or brain. In other words, we will find that the three different principles just mentioned, viz., the chronological, the anatomical, the pathological, are mixed up together. If the result is not satisfactory, the fault lies with the principle of classification, or rather, with the unruly disease, which baffles all attempts at orderly arrangement. As I have said,

this is most apparent where syphilis of the nervous system is in question.

Of late, our views with regard to the time of onset of nervous diseases in syphilis have undergone a complete change. Formerly, brain and spinal cord were considered the parts last to be attacked by the syphilitic virus. Careful statistics, however, show that while the first year after infection furnishes a very large proportion of cases of nervous diseases, it is the first two years, taken together, which produce considerably more than half of all the nervous diseases to be observed in connection with syphilis. Two, or even three, years is now the duration generally allotted to the secondary stage. It follows, therefore, that the majority of nervous affections in syphilis belong to the secondaries, or what is generally called so.

It is generally granted that there is no nervous disorder characteristic of syphilis. Of course, there are certain features —the multiplicity and transitoriness of the symptoms, the proneness to relapse, etc.—which will favor the diagnosis of syphilis. But even these, syphilis has in common with *non-syphilitic* nervous diseases, such as hysteria and multiple sclerosis. On the whole, there is not a single clinical criterion by which we can with any degree of certainty declare an affection of the nervous system to be syphilis. Consequently, our diagnosis rests on three points:

1. A previous history of the disease, or traces of past or present syphilis.

2. The possibility of excluding other causes.

3. The effect of anti-syphilitic treatment.

With regard to the *first* point there is the possibility of a double fallacy; that everything found in a syphilitic is not necessarily due to syphilis; secondly, that the absence of all evidence with regard to syphilis, past or present, does not in any way disprove the syphilitic origin of the nervous disease. The *second* point is of a still more intricate nature. With the unsatisfactory state of our insight into the etiology of nervous disease in general, the inability to find some other plausible explanation for the existence of some nervous disorder, amounts to a confession of the limitation of knowledge, rather than to the "exclusion" of other possible causes. Moreover, it is rare to find cases in which a careful and complete examination of a patient's general health, hereditary tendencies, habits, etc., fails to reveal some other condition which might have had a noxious influence upon the nervous system. And, with regard to the *third* point, my belief is that the diagnostic value of the so-called specific drugs is considerably overrated; for not only are we constantly open to the old *post hoc propter hoc* fallacy, but also many nervous diseases, whether syphilitic or not, may greatly improve, and even disappear without any treatment, specific or otherwise. And we must remember that the inefficiency of the treatment proves nothing against the syphilitic nature of the complaint, while, at the same time, it seems quite unlikely that the efficacy of such powerful drugs as mercury and iodide of potassium should be limited to one particular disease. Those who, for diagnostic purposes, rely upon the effect of "specific" drugs, will make grave mistakes. With regard to mercury, it will be generally admitted that its curative effect extends beyond the domain of syphilis. To the preparations of iodine, on the other hand, an almost exclusive action is ascribed by many. Statements of this kind always invite a close scrutiny of the evidence upon which they rest. If we take the rough-and-ready routine treatment of organic disease of the nervous system of *doubtful* origin, it consists, first and foremost, in the application of anti-syphilitic treatment. According to general usage, its efficacy is admitted as sufficient proof of the syphilitic nature of the disease. If, relying on this principle, we adduce such cases as proof of the specific effect of the drug, we are moving in a vicious circle, and I feel sure that many of the statements with regard to the so-called specific action of these drugs rests on such false reasoning. Of course, where all three points can be satisfactorily established, *i. e.*, where there is clear evidence of present or past syphilis, no concurrence of other etiological factors, and a speedy or more or less complete recovery under specific treatment, the diagnosis can, *intra vitam*, be made with

a probability, practically amounting to a certainty. Even then mistakes are possible. But cases in which all these conditions are fulfilled are comparatively rare. If one goes carefully and critically through the profuse literature of the subject, closely examining the evidence given, one is struck by the levity with which the diagnosis of syphilis is frequently made. If there were such a thing as the Scotch verdict, "not proven," in syphilography, syphilis of the nervous system would shrink surprisingly. The statement, for instance, that tertiaries of the nervous system are more frequent than tertiaries of other organs, is explainable by an individual experience, or, perhaps, by an indiscriminate and hasty procedure in diagnosing syphilis.

We must add that, even histologically, the diagnosis of syphilis of the nervous system can not be made with absolute certainty from the anatomical appearance alone. We know that in syphilitic diseases of the nervous system the nerve substance remains primarily intact; that the changes which it undergoes are secondary to gummatous growths, meningeal exudations, and vascular alterations which disturb its nutrition. But these changes are, one and all, *not* pathognomonic. The gumma, the obliterating arteritis, once considered as truly specific, have, with the progress of histological research, lost this claim.

A casual connection between syphilis and a nervous disorder can not be established by the report of isolated cases, but only by the consideration of a large number of cases of the same kind. This difficulty of diagnosis is further increased, if we turn from the syphilitic diseases of the nervous system to those called parasyphilitic. With an Apollonian *"Inventum medicina meum est,"* Fournier proclaims himself the "inventor" of parasyphilis. Indeed, the numerous contributions to the subject which have followed the publication of his work in 1894 seem to be more or less *μιᾶς φωνῆς πολλαὶ ἀντανακλάσεις*—the re-echoings of his powerful and far-reaching voice. Thus to discuss the principles of the doctrine and its bearing on retrospective diagnosis and treatment, means nothing else than to discuss the principles laid down and the conclusions drawn in Fournier's writings. I am, therefore, justified in closely following and limiting myself to his line of argument. Dr. Edmund Fournier's book on the same subject I shall treat as one of his father's, as he himself declares, *que son père en reste l'inspirateur et l'auteur anonyme.*"

A parasyphilitic affection is defined as one syphilitic in origin, but not in nature. Its two characteristic features are the following:

1. Parasyphilitic affections are to be met with independently of syphilis; they may be due to other causes as well; they are banal, while syphilitic lesions, properly so called, such as mucous patches and the gumma, are never produced outside the domain of syphilis.

2. The so-called specific drugs, *i. e.*, mercury and iodide of potassium, have a totally different influence upon parasyphilitic affections from that which they are known to exercise upon true syphilitic lesions.

"There is really an abyss between the one and the other." These drugs are said to have either no effect at all upon parasyphilis or the effect is slow and incomplete, while in the case of syphilis proper, it is "rapid and efficient." "These two principal features," according to Fournier, "seem to establish a well-marked line of demarcation between syphilitic affections proper and the so-called parasyphilitic ones."

If, from a clinical point of view, the specificity of the mucous patch and the gumma has to be granted, there still remains among true syphilitic lesions a great many which, to use Fournier's own words, are "banal and borrowed from ordinary pathology." As such he, himself, mentions the disturbances of the general health, fever, anemia, asthenia, wasting, cachexia, etc., as well as aches and pains, neuralgia and neuroses, which have nothing specific besides their origin. He also mentions rashes of the skin, so similar to, and so much resembling, common rashes that the most expert dermatologist is unable to differentiate between them. But the list of non-specific, yet truly syphilitic lesions, is by no means exhausted. Hutchinson has made the remarkable statement that all the

various phenomena of disease due to syphilis are imitations of other non-specific type forms. "We have," he says, "absolutely no malady which is peculiar to syphilis." Without going so far, it will have to be granted that, apart from those mentioned by Fournier himself, numberless affections, such as iritis, choroiditis, hemiplegia, paralysis of single nerves, transverse lesions of the spinal cord, etc., present nothing specific, apart from their origin. Nobody would think of excluding all these manifestations of true syphilis from the domain of syphilis proper under some other name for the sole reason that they are "banal." Moreover, there is among those who grant the specificity of certain syphilitic affections a great diversity of opinion regarding the affections deserving of such a distinction, viz., to be considered pathognomonic. Take, for instance, interstitial keratitis. I believe that, notwithstanding the statement just quoted. Hutchinson does not hesitate to base the diagnosis of inherited syphilis on this symptom alone. It is the same with the notched teeth which go by his name. And with regard to either symptom, he has many convinced followers. According to Fournier, and perhaps the majority of syphilographers and ophthalmic surgeons of our time, both symptoms are to be met with in other diseases besides syphilis; they are "banal." Interstitial keratitis is, to some, nothing but an expression of impaired nutrition, to others, as frequently, of tuberculous as of syphilitic origin.

Leucoderma is given by Fournier as the classical prototype, the type par excellence of a parasyphilitic lesion. On the other hand, I. Neumann, of Vienna, says that there exists at present only one opinion, viz., that leucoderma is absolutely characteristic of syphilis. Very few, I believe, will not subscribe to this statement. Opinions are, likewise, divided with regard to ophthalmoplegia externa, to the skin infiltration of the newly born, to certain forms of choroiditis, to spastic spinal paralysis, etc. On the other hand, it seems that at least one parasyphilitic lesion does not deserve the designation "banal," if one is to go by the frequency with which syphilis can, according to Fournier, be proved in its previous history, *i. e.*, tabes. He has found that of thirty-six observations in reference to gumma of the palate, forty-four per cent were without a syphilitic history. He confesses that this proportion is extraordinary and unusual, and taking into account the possible error caused by what he calls "*la chance des séries*," *i. e.*, the accidental similarity or identity of a number of consecutive cases —he proposes to reduce it, and even to diminish it by one-half—a reduction on a most extraordinary scale, considering the probability of such serial sequence. That would still leave twenty-two per cent without a syphilitic history. Syphilis is a cause of tabes, according to Fournier, is present at least nine times out of ten, *i. e.*, there are less than ten per cent without a history of syphilis. If one takes into consideration the mental state of some of the patients on whom we have to rely for their previous history, "without mentioning all the cases of syphilis abnegated or willfully concealed, of syphilis overlooked or unnoticed, also the cases of conceptional hereditary syphilis," one would scarcely be surprised to find the final figures on the other side of a hundred, in the same way as the addition of certain mortality statistics leads to figures in excess of the birth-rate. I may be allowed to remark that from my own experience, which extends over more than one hundred and forty hospital and no small number of private cases, I am personally convinced of the important part which syphilis plays in the production of tabes without, however, going to extremes or even believing that the question has been finally settled. Different observers, from different parts of the world, have pointed to the non-existence or infinite rarity of tabes in districts where syphilis rages endemically. At the first glance this seems to be a very strong argument against the specific origin of tabes. Yet it has to be borne in mind that exactly the same has been reported with regard to other affections, which in our climes, at least, are undoubtedly a frequent consequence of syphilitic infection, such as diseases of the eye. How far functional use or "irritation" influences the localization of the noxious effects of the syph-

ilitic poison, we do not know. With the present state of our knowledge we must confess that certain facts in the pathology of tabes are only with great difficulty, if at all, reconcilable to the doctrine of its syphilitic origin. Anyhow, it seems strange to call an affection "specific" which, in its antecedents, lacks evidence of syphilis in from twenty-two to forty-four per cent, while another should be "banal" with less than ten per cent. I am not aware that this strange contradiction has been pointed out before, much less that it has been satisfactorily explained.

In his recent careful and interesting statistics of tertiary syphilis, Neisser gives the percentage of those who present tertiary symptoms without a history or evidence of previous infection at about fifty. How can it, then, be explained that an affection like tabes, which, after all, belongs to the late sequelæ of the disease, should, in its previous history, afford evidence of syphilis with such astounding frequency? The only explanation which presents itself to my understanding is that some seekers after syphilis will seek and find even an "absent argument." For general paralysis, the percentage is, by several authors, given as high as for tabes. The obvious consequence would be that the disease can not be called "banal." Banality, one of the "characteristics" of parasyphilitic affections, is, as we have seen, not an attribute of all of them, while it is an attribute of numberless syphilitic affections. Which particular affections are to be considered specific, which "banal," is, after all, to a large extent, a matter of personal opinion. Anyhow, the most banal of lesions may be and frequently is syphilitic.

With regard to the second "characteristic"—the influence of specific drugs—it must be admitted that this seems only a question of degree. Of course, in many syphilitic affections, the effect of mercury and iodide is "at once intense and rapid." But I am not going to enumerate all those in which it is slow, little or none. Quite apart from cases of idiosyncracy to the drugs, or cases of malignant syphilis, one has only to think of the many disappointing results in cases of hemiplegia choroiditis, ophthalmoplegia, spastic spinal paralysis, etc., to realize the incongruity of making the effect of the drug a criterion of the nature of the disease. On the other hand, it is not generally admitted that specific drugs are powerless in leucoderma, tabes and general paralysis. Good results have been reported in general paralysis and in tabes which, unfortunately, I have never been able to obtain. Fournier, himself, has had most satisfactory results, amounting to complete cures, in cases of parasyphilis, where one would expect them least, viz., in certain heredo-syphilitic dystrophies, and he advocates mercurial treatment in most cases in which parasyphilitic affections are met with in children only suspected of heredo-syphilis. "Those who think that the result of treatment by specifics may be relied upon as establishing the diagnosis, may easily make great mistakes. Syphilitic affections often resist treatment for a long time (I may add, even altogether) and, on the other hand, mercury and iodides often effect the greatest possible good in cases which are not syphilitic" (Hutchinson). How, then, could a "characteristic" of this kind be of use in drawing a line of demarcation between two classes of affections, supposed to differ in nature? Later on, I shall have to say a word on the "nature" of parasyphilitic affections in general. Of the arbitrariness which must, of necessity, reign in allotting a certain disease to one of the two classes of affections, I want to give at least one instance. Interstitial keratitis, according to Fournier, is not necessarily syphilitic, an opinion in which I concur. All will agree that, if at all, it is neither rapidly nor intensely influenced by drugs. Its course may be shortened and attenuated, but on the whole it is an affair of many months, whether treated by specifics or not; it is never cut short by them, and with the most energetic treatment, is often extremely tedious. Yet this affection, bearing both the characteristics of parasyphilis, is not classed under the latter. This example conclusively demonstrates that either of the two criterions, taken singly or together, is utterly unfit to decide anything respecting the nature of the disease. Take, for instance, a case of spastic spinal paralysis, or of choroiditis (both "banal" affections)

of undoubted syphilitic origin, as proved by the co-existence of such specific lesions as a gumma, which latter disappears under specific treatment, while the paralysis, or the choroiditis, remains little or not at all influenced. Such cases abound. Was the "banal" affection syphilitic or parasyphilitic? It was, of course, syphilitic, although it bore both the characteristics of parasyphilis, viz., banality and refractoriness to specific treatment. The classical type of parasyphilis will, after all, be a scar left by some ulcerative syphilitic process, for instance, an ulcerative gumma. Here we have a lesion of undoubtedly syphilitic origin, and possessing the qualities of banality and refractoriness to treatment. If one were to object that a scar can not properly be called an "affection," it has to be remembered that the terms "affection," "stigma," and "lesion," are all through used promiscuously by Fournier. A scar certainly is a stigma, and intra-uterine amputation stumps or dental erosions are no more "affections" than scars are. But there seems no need for inventing an extra name for a scar left by a pathological process, nor can anything be gained by huddling together distinct pathological processes, as, for instance, pneumonia, corneal ulcer, etc., when due to the same cause, *e. g.*, measles, under the denomination of parameasles.

With regard to the parasyphilitic affections following acquired syphilis, I shall have to say only a few words. The connection of tabes and general paralysis with syphilis seems to me established by carefully and critically sifted clinical evidence. Nothing of the kind can be said of any other parasyphilitic lesion attributed to the acquired disease, such as neurasthenia, hystero-neurasthenia, hysteria, epilepsy, etc. Of course, in a neurotic person syphilis may, and will, like any other disease, play the part of *agent provocateur*. In this way syphilis will be responsible for many manifestations of the variegated disease called neurasthenia. But so will gonorrhea or a cold, or any other complaint befalling a neurotic person. To give an idea of the degree to which syphilis may react on the mind and, consequently, on the nervous system, Fournier cites the case of a young man who, on being told that he had an indurated chancre, immediately went home and hanged himself. Of course, suicide here seems parasyphilitic *par excellence*, although parasyphilis at a remarkably early stage. Its syphilitic origin is beyond doubt, it is eminently "banal" and past cure.

A similar event has quite recently been reported by another eminent syphilographer in a case of gonorrhea. It would seem odd to describe it as paragonorrheal, yet there is, apparently, no reason why the frequent and profound disturbances of psychical functions, following this disease, particularly in its chronic stage, should be treated differently from those caused by syphilis. In the new "Traité de Syphilis," by Fournier, the functional disorders of the nervous system during the secondary stage are treated at considerable length. Here they are described as syphilitic, and specific treatment is urgently recommended as the only and certain remedy. In his book on parasyphilis, the identical nervous disorders are treated at the same length, and the complete inefficacy of specific treatment is given as proof of their parasyphilitic nature. It seems that exactly the same nervous complaint during the same stage may, in his opinion, be either syphilitic or parasyphilitic, either only curable by specifics or not at all. That strange symptom boulimia, as a manifestation of syphilis, although by no means unknown in the country of beef-eaters, appears in the "Traité" as a syphilitic disease, the symptom of a "diathesis, which requires the treatment necessary for that diathesis and nothing more." In the work on "Parasyphilis" this very same boulimia appears (in a foot note) as a parasyphilitic affection, the characteristic of which is not to yield to specific treatment. Evidently, we are to understand that during the secondary stage of syphilis there is a boulimia syphilitic, and apart from it a boulimia parasyphilitic, both affections "banal," the one curable and curable by mercury alone, the other not amenable to mercurial treatment. Such incongruities are the natural outcome of the capricious principle underlying the whole division between syphilitic and parasyphilitic lesions.

My conclusions may be summarized as follows:

1. Syphilitic diseases of the nervous system appear most frequently during the first year after the infection, that this frequency decreases from year to year, and that within the first year they seem to be a little more frequent during the first than during the last six months.

2. The relation between cured and uncured cases is nearly the same between the ages of twenty and twenty-nine as it is between the ages of thirty and thirty-nine, and also very nearly the same as for the total number of cases. After the fortieth year the prognosis becomes somewhat less favorable.

3. As long as the nervous disease appears within about ten years after the infection, it is of very little moment whether it appears early or late. After the interval of ten years the prognosis becomes less favorable.

4. It is irrelevant, as far as the prognosis is concerned, what time has elapsed since the last syphilitic manifestation, as long as the interval does not exceed ten years. After the tenth year the prognosis becomes decidedly more unfavorable.

5. The prognosis is considerably more favorable in cases with early treatment, viz., before the end of the first four weeks. After the first four weeks cures are considerably less frequent.

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Ringworm and Its Treatment.

BY A. WINKELRIED WILLIAMS, M. B., C. M. (EDIN.), D. P. H. (LOND.).

Physician to the Skin Department Royal Alexandra Hospital for Sick Children.
Brighton, England.

No. I.

The subject of ringworm is always of interest and often, unhappily, of distress to practitioners of medicine, to parents, and to teachers. The uncertainty of results of treatment in scalp cases, the peculiar obstinacy of the fungus in some children, have led to such serious delay in their education that the subject is one of great national importance. The recent improvement in the methods of using X-rays, and the great success of this treatment *when available*, makes the present time a suitable one for a general review of the disease and its treatment.

Readers of the MEDICAL BRIEF will remember the paper by Dr. Blaxall* relating to the various fungi causing ringworm. The study of this subject is a curious chapter in the history of medicine, a chapter illustrating confusion and forgetfulness on the part of physicians, dermatologists and pathologists working on the subject between 1843 and 1893.

In 1843, Grüby described the fungus of small-spored ringworm, but his work was neglected and forgotten until Sabouraud published his work on the varieties of ringworm.

The work of Sabouraud was accompanied or followed by a host of other investigators, prominent amongst whom are Adamson, Blaxall, T. C. Fox, Malcolm Morris, Leslie Roberts, and others. A huge variety of fungi have been described, many of which are sub-varieties produced by differences in mode of culture.

The following table includes the maximum number of varieties that can be said to have clinical significance:

Ringworm.
- Small spored fungus (microsporon audouini.)
- Large spored fungus.
  - (a) Trichophyton megalosporon endo-thrix.
    - (1) Resistant.
    - (2) Fragile.
    - } Mycelium.
  - (b) Trichophyton megalosporon ecto-endothrix.

CHARACTERISTICS OF ABOVE VARIETIES.

I.—MICROSPORON AUDOUINI.

Common type of scalp ringworm of children, rare in adults, occasionally found in domestic animals. Rarely infects children after the age of fourteen years. Body patches usually insignificant. Most extremely contagious. Scalp lesions usually obstinate.

Scalp Lesions. (1) *Onset Progress.*—Small, red papule about orifice of follicle, spreads peripherally and scales develop, the hairs lose gloss, look dusty, become thickened, lose elasticity and then break off.

(2) *Fully Developed Untreated Patch.*—Distinctly circumscribed, round or oval shape, reddish tint, peripheral red ring, scalp slightly raised at patch. Usually a dirty, scaly look, crusts. Patch studded

* MEDICAL BRIEF, August, 1897.

with hair stumps, which are surrounded for a short distance above the skin with asbestos-like collarette.

Glabrous Skin Patches.—Generally confined to head and neck, but may be universal. *Type A.* Commoner, small, irregular, scaly patches; slight redness. *Type B.* Raised red rings, with double contours; sometimes a second ring inclosed in first. Spread centrifugally.

Microscopic Examination. (1). *Hair from Early Patch.*—Few large spores and perhaps a loose meshwork of large, peculiarly transparent mycelium scattered over shaft. Hair cuticle intact.

(2) *Further Advance.*—Mixture of large and small spores, large and small mycelia; hair cuticle loosened and separating or separated in places.

(3) *Fully Developed Stump With Collarette.*—A sheath of small spores extends from just above junction with bulb to some distance up shaft; no definite arrangement in the closely-packed double-contoured spores. A mycelial fringe extends below sheath. Septa in mycelia irregularly placed and generally far apart. Above the complete spore sheath are situated here and there irregular masses of spores. Below spores on surface of shaft a mycelial meshwork extends upwards to broken end of shaft.

Natural History.—After infection giant spores form on surface of hair, then giant mycelium penetrates and develops as a meshwork inside root sheath. From the giant mycelial threads fine shoots (*haustoria*), grow out and pierce cuticle and secrete a kerato-solvent matter which digests and strips cuticle from hair shaft. Then a fine meshwork of mycelia closely envelops shaft from which small spores rapidly develop, and form spore sheath, and the giant spores disappear.

II.—TRICHOPHYTON MEGALOSPORON ENDOTHRIX.

It is doubtful whether the *two types*—resistant and fragile mycelium—are really different species of fungus.

General Clinical Features Common to Both Types.—Infection may occur in much older children than in case of microsporon. It is, however, less virulently contagious, and generally less obstinate. The scalp patches are cleaner than microsporon. They are smoother, and not raised and covered only with broken hairs and stumps. Body patches common, usually small, well defined, raised, red and scaly. Beard and nails not attacked.

Microscopic Appearance Common to Both Forms.—Larger size of spores. Spores inside hair. Arrangement of spores in lines, giving string of beads or ladder-like appearance.

III.—TRICHOPHYTON MEGALOSPORON ENDOTHRIX AND RESISTANT MYCELIUM.

Clinical Features.—*Scalp patches* generally smaller than microsporon; few or numerous patches. Some cases with no distinct patches; only groups of stumps; scattered stumps and black dots; usually a general seborrhea-like scurf.

Microscopic Appearance of Hairs—Early Stage.—Strings of jointed mycelium, and spores outside hair. *Fully developed.* Inside hair are long mycelial rows, more or less broken up into spores. Many spores are square (ladder-like look of row of mycelial spores). Some spores separate and are rounded or oval. A mycelial fringe stretches down at bulb. Mycelial threads larger than microsporon.

IV.—TRICHOPHYTON MEGALOSPORON ENDOTHRIX WITH FRAGILE MYCELIUM.

Clinical Features.—Found at times in adult scalp. *Scalp Lesions.*—Patches, when present, are more or less rounded, size variable, surface generally smooth and bald (resemble alopecia areata). Patches sometimes so small and scattered that disease is unnoticed. Hairs are often found in scattered groups of stumps or stumps isolated and scattered over scalp. The stumps are very short and so fragile that epilation may be almost impossible.

Microscopic Appearance.—Fully Developed in Hair.—Entire hair filled with big spores, spores rounded, arrangement in strings distinct in places; in other parts difficult to recognize. Mycelial fringe at bulb. Cuticle usually present, not easily recognized in much smashed hair. This type of ringworm is often diagnosed as alopecia areata.

Trichophyton Megalosporon Ecto-Endothrix. Clinical Features.—No marked age limit. Often communicated from lower animals to man. Causes parasitic sycosis,

ringworm of nails, majority of cases of pustular ringworm, and eczema marginatum.

Hairy Parts.—Begins as ring of papules, vesicles form in papules and then become pustules, vesiculation and pustulation not necessarily marked; crusts often form, with a red, oozing surface below. Hairs often not broken, except in old cases, and even then stumps are relatively long. The hairs are often matted down in the crusts, hairs are loose. On extracting hair, a well-marked sheath is seen on the epilated hair. The sheath does not project above the level of skin as in microsporon.

Body Surface.—Begins as small, red macule or papule, or often first seen as a scaly red patch. Peripheral spread, the center often becoming normal, but not always, it may remain less red, but still scaly; it may remain pustular, margin usually pustular. In animal communicated cases the whole patch may attain full size, and be uniformly composed of pustular points.

Microscopic Appearance.—Hair.—Spores often not much larger than in microsporon, and look like them in the external sheath. They form round hair. Cuticle of hair is usually not stripped off, but it can not always be clearly recognized. Hence, clinical features or culture test must decide the question of type, more than microscopic appearance.

The cultural appearance of the different varieties depend much upon the medium, etc., and so are not of great clinical value. The main point of practical interest is that on a medium, such as beer wort agar at 30° C., microsporon ringworm appears as a visible growth in nine to ten days. The large-spored fungi grow much quicker, a visible growth appears in three or four days.

A study of the therapeutics of ringworm may be approached from, firstly, *the pharmacological side, i. e.*, a consideration of the various drugs used in its treatment, their action upon the tissues, upon the fungus causing the disease, and upon the morbid matter produced by the fungus. From, secondly, *the clinical side*, by a consideration of the special regions of the body attacked by the ringworm fungus, and the treatment applicable to each region. From, thirdly, the *public health side*, the modes of limiting the spread of the disease in schools and other communities.

It is unnecessary to give details of the *pharmacology* of the remedies used in ringworm. They may be classified as follows:

FIRST—*Agencies of Value in Cleansing the Skin from Debris, e. g.*, soap, water, spirit ether, ether and alcohol, fixed oils, kerosene, turpentine, chloroform, potash, soda, etc. Also various mechanical methods, as hair clipping, shaving, epilating (mechanical and X-rays), curetting, etc.

SECOND.—*Applications used to attack the Ringworm Fungus.*—Various antiseptics, starving out the fungus, disinfectants, destroying the more superficial fungus.

THIRDLY.—*Applications Used to Modify and Alter condition of Soil on Which the Fungus Grows.*—(a) *Reducing agents, i. e.*, drugs removing oxygen from surface of epidermis and increasing keratin formation, which in the scalp tend to hasten the development of the adult condition. Most of these reducing drugs also act as antiseptics and disinfectants, *e. g.*, resorcin, chrysarobin, ammonium sulpho ichthyolate, sulphur, etc. Also mechanical methods of *endeavoring* to exclude oxygen, *i. e.*, plasters, solutions of gutta percha, collodion, etc.

(b) Attempts to desiccate the skin, *e. g.*, alcoholic sprays, abstinence from water washing, etc.

(c) Drugs of value in removing coexisting diseases, *e. g.*, seborrhea, the presence of the seborrhea products increase the virulence or vitality of the ringworm fungus.

(d) Drugs causing inflammatory or other reactions of the skin, with the products of which the ringworm fungus may be cast off, *e. g.*, croton oil, common salt, X-rays, etc. Most of the disinfectant drugs act this way, notably iodine, tar, carbolic acid, turpentine. Also mechanical methods, by friction, pressure, rough, epilation, especially epilation by plasters, epilating sticks etc.

FOURTH.—*General conditions raising physical state of patient.*

FIFTH.—*The Vehicle by Which Active Drugs Are Conveyed to the Skin of the Patient.* (1) Watery solutions or suspensions (to be used after a preliminary removal of grease from the surface by soap, ether, etc.).

(2) Spirit.

(3) Collodions, traumaticin, plasters, etc.

(4) Fatty substances. These are the most generally used and usually the most valuable on account of their penetrative action, *e. g.*, lard, mineral oils, liquid animal (whale) or vegetable oils. Probably lanolin, with a softening addition of a liquid oil, is the best; its penetration power is considerable. Oxidized mineral oils, *e. g.*, valsol and vasogen, are highly praised on account of their penetrating power, but the author's experience of these vehicles has been disappointing. The most useful form is six per cent iodine vasogen; this, in a few cases, caused a pustular perifolliculites followed by an easy extraction of the entire hair and a rapid cure, but in many cases no result followed, while in a few instances, where the child had an idiosyncrasy to iodine, its application was followed by great pain, lasting for several hours, with production of bullæ, without marked loosening of the hairs.

Aniline oil has also been praised by some; it certainly takes active drugs through the epidermis, but can only be used on a small area and applied only for a minute or two, or alarming and dangerous symptoms of aniline poisoning result, with cardiac failure and cyanosis. The author's experience of this medium leads him to warn practitioners to try any other method in preference.

THE STUDY OF RINGWORM FROM THE CLINICAL SIDE.

Regions to Be Considered.—

The scalp.

The nails.

The beard.

The axillary and crural regions.

The body general.

The Scalp Region.—Great difficulties are met with in this region, and authorities are not in unity on many details, notably:

1. Washing.
2. Cutting hair or shaving.
3. Value of mechanical epilation.
4. Relative value of drugs.
5 Vehicle for application of drugs.
6. Safety or danger of X-ray treatment.

The following notes may help to solve some of these questions:

Great care is necessary in soap and water washing or infection will be spread, especially when large areas of previously untreated ringworm exist on the scalp. The patches must first be cleansed from surface debris, etherial antiseptic soaps, etc., are useful; curetting and rough epilation, after oiling surface, may be necessary. The scalp is then washed, some authorities recommend soft soap; the author uses a one per cent to three per cent biniodide soap. After washing, careful drying is necessary, and a dabbing and not a rubbing movement of the towel used. Drying must always be *immediately* followed by application of an antiseptic to the entire scalp. The above method of washing is impossible with long hair, shaving scalp or clipping hair is, therefore, necessary, leaving, at the utmost, a narrow peripheral band of longer hair. The author recommends shaving in the early stage and clipping in the later stages, when it is important to examine hairs to decide whether they are sound or diseased.

The following are suitable antiseptics for use after washing:

1. A spray of strong solution of sulphurous acid.

2. A spray of one-half ounce eucalyptus oil in ten ounces spirit.

3. Oiling with salicylic acid in oil.

4. One drachm precipitated sulphur in one ounce of olive oil. This is the author's favorite. Its only objections are (1) it somewhat hides the scalp, (2) it produces, especially when mercurial applications are used on the patches, a dirty look at border of scalp. The former difficulty is avoided by a visit to the patient at end of scalp washing, and the latter is a temporary inconvenience.

5. Carbolic acid in glycerine (one in eight). This is a favorite with patients and it is useful, as it does not hide the scalp, but during its extensive and regu-

lar use it is advisable to examine the urine and stop its use at the first indication of albuminuria.

Epilation, excepting in cases where hairs are loosened by inflammatory and pustular processes round the follicles, is only a partial process, on account of the easy fracture of the hair shaft, leaving in the deeper part of the follicle an injected stump. It, however, removes a large amount of infective matter and leaves for a few minutes a gaping follicle into which antiseptic ointments can be more easily rubbed.

In kerion and such pustular affections, loosening the hair in follicle epilation is of intense value. In kerion, the author's experience shows the value of epilation, giving, if necessary, an anesthetic and, after epilation, boroglyceride is a valuable application. It is quite a mistake to wait until the hairs fall out.

The author's routine in ordinary ringworm is as follows:

1. Short clipping or shaving scalp.
2. Cleansing the patch. (a) Rub on a little antiseptic ointment and with forceps epilate roughly the patch. (b) Cleanse it from debris by ethereal antiseptic soap and rub it with turpentine.
3. Wash head with biniodide soap and apply sulphur and oil over entire scalp.

The above treatment to be applied once a week. In interval, use antiseptic ointments rubbed well in, twice daily, and once a day apply the sulphur oil to entire scalp, and about twice a week apply to patch, after cleansing with ether, one drachm carbolic acid, and one ounce of acetic acid. This application must not be used indiscriminately or sloughing of the skin may be produced.

In later stages, Aldersmith's croton oil treatment is largely used.

The internal administration of small doses of arsenic and iron often helps in obstinate cases. The doses are not large enough to produce edema of the deep layer of epidermis, or to be eliminated with the hair cells, and its exact action is difficult to explain, but the author has frequently seen cases which were at a standstill in non-anemic children commence to improve directly this internal treatment was added to the local treatment.

[Written for the MEDICAL BRIEF.]

Squint and Ocular Paralysis.

BY EDWARD LUCAS HUGHES, L. R. C. P. (LOND.), M. R. C. S. (ENG.),

Fellow of the Royal Institute of Public Health; Late Ophthalmic Surgeon to the Hope Street Hospital. Liverpool, England.

There has always been in medicine a sort of warfare between empiricism and science, and nowhere has this been more the case than in the realm of the pathology and treatment of squint. Empiricism has had such an advantage, owing to ignorance of the true nature of the subject, that it is only of recent years the subject has become placed upon a firm scientific basis, and even now the immediate brilliant results of operations upon the recti muscles seem, at first sight, to confirm past erroneous ideas, and to militate against the true scientific explanation of the facts. The path of science is slow, tedious and often extremely difficult; the human mind desires a short cut, a royal road to immediate success. Empiricism offers that royal road by substituting blind action, based upon the jumping at wrong conclusions, and as Professor Edgar Browne puts it, "It frequently obtains an apparent victory over science, because it offers the bribe of a cure, rather than the labor of investigation." Our patients are waiting, and whether we have been taught the right thing or the wrong, whether our reasons for action are scientific or not, there is aways an intense desire on the part of the prompt and practical surgeon to do something, and, indeed, circumstances have nearly always been such that he has not been able to wait for slow, but sure paced, science to overtake him.

The fundamental mistake in the past has been to regard squint as a deformity of the ocular muscles, a purely mechanical displacement, due to anatomical conditions, a supposed shortening, for instance, of an internal rectus muscle, producing a turning inwards of the eyeball, *i. e.*, convergent squint. Tenotomies for the cure of this supposed deformity have been performed galore, in many cases with immediate brilliant results, thus

seeming to prove the deformity idea, but the ultimate results of many of these operations, even cosmetically, have been far from satisfactory. The operation for many years was the admiration of the profession, and surgeons enthusiastically benefited, as they thought, almost every child they encountered that was seen to have a "turn in its eye." Boys are said even to have been brought in from the street to the hospital by enthusiastic operators, and tenotomy, principally that of the internal rectus, was all the rage. That the victory of empiricism over science, as regards this operation, is likely to prove ephemeral, may be shown by a typical case in point.

A man, forty-four years of age, amblyopic in the right eye, shows a slight external squint. He has crossed diplopia, which bothers him sometimes, especially when his accommodation is relaxed. The history is that when six years of age he was operated on for convergent squint of the right eye. At the age of twenty he consulted an oculist, who prescribed glasses for his hypermetropia. The amblyopic eye had +6 D of hypermetropia, with about 1 D of hypermetropic astigmatism, and there was about 3 or 4 D of total hypermetropia of the left eye. He had not worn glasses before the age of twenty. The oculist urged him to again have the internal rectus cut, since even then he had some amount of convergent squint. He, however, refused and decided to wait and see what glasses would do for him. The eyes became straight and the glasses were then altered by another surgeon to a much stronger pair, much more of the latent hypermetropia being corrected, the anisometropia and astigmatism of the right eye being attended to. These glasses, with a slight modification, have been worn ever since, the vision of his right eye has decidedly improved, but there has developed a tendency to divergence, and he shows a sunken caruncle. The divergence, as well as the shrunken caruncle, are both due to the operation of his childhood. What would have happened if there had been a repetition of his tenotomy when he was twenty years of age? Certainly there would have been an extreme divergent squint.

Advancement of the opposing muscle has largely superseded tenotomy of late years, but this is merely shifting the burden from one shoulder to the other, as whether the leverage of one muscle is lessened, or the leverage of the other increased, the result is the same. We must not be biased by the facility of an operation, or the brilliancy of its immediate results from endeavoring to ascertain what are the reasons why the muscles behave in a seemingly abnormal manner. So long as we regard squint as a muscular deformity, and attempt to remedy it by forcible readjustment of the tendinous attachments, so long are we dealing with effects and not causes, and we are, in spite of all improvements in the measurements, ocular movements, and in the details of surgical procedure, still living in the era of Dieffenbach, and followers of his teaching.

The history of strabismus is interesting. Stromeyer and Dieffenbach were practically the pioneers of the modern operative treatment of squint. To them is due the devising of an operation something like our modern tenotomy, but as far back as the seventeenth century, a surgeon named Taylor suggested operation. His attempts were like those of Dieffenbach, in that they consisted in dividing the fleshy part of the muscle and not the tendon; however, they were abandoned, as they were unsuccessful. In the early part of the nineteenth century Stromeyer began to perform myotomy, not tenotomy, upon the cadaver, but it was not until the year 1839 that Dieffenbach began to perform his myotomy operation upon living patients, and introduced it into practical surgery. When he announced, in 1840, to the French Academy of Science that he had cured at Berlin many cases of squint, French surgeons of the time, Roux, Velpeau and Sédillot, commenced to practice the operation, but with utter want of success. It needed Philips, Dieffenbach's pupil, to come to Paris to show them how his master operated "the aponeurosis (Tenon's capsule) was largely separated, and the sclerotic denuded for about a third" (Bérard, article on "Strabismus," in the Dictionary of Medicine, 1844). The ultimate results of this practice were, however, found to be very bad,

causing secondary strabismus, retraction of the caruncle and exophthalmos. A great advance was made when Bonnet of Lyons introduced cutting the tendon, instead of dividing the muscle, showing, after an excellent study of Tenon's capsule and the muscular insertions, that to cut the fleshy fibers was altogether unnecessary. Von Græfe has generally been given the credit of suggesting tenotomy, but the French assert that the honor of its very first introduction belongs to Bonnet of Lyons.

It was another Frenchman, Jules Guérin, who first thought of the operation of advancement. He thought of it as a remedy for a secondary divergent squint, the result of an unfortunate tenotomy for convergent strabismus, this occurring so frequently in his day. Subsequently, George Critchett (*Medical Times and Gazette*, 1857), Liebreich de Wecher, and others, caused the operation to become generally known. Landolt has shown that excellent results may be obtained in a very bad case by an advancement performed upon the two eyes. Squint is not, as is commonly thought, an affection of a single eye; it really affects both eyes. One eye is the apparently good, *i. e.*, the fixing eye, according to circumstances. If the squinting eye is made to fix, which can be always done in recent cases, its fellow will be seen to squint in the same manner and degree. This is called secondary deviation. Some cases are known as alternating squint, each eye taking its turn to do the squinting, while its fellow is performing the duty of fixation. The vision of both eyes, in these cases, is generally good, and there is some amount of the fusion faculty. About the time that Donders was doing splendid work, in showing the relationship that existed between accommodation and convergence, and the rôle that errors of refraction frequently played as an important contributing factor in the etiology of strabismus, George Critchett, of Moorfields, was introducing great improvements in operative technique. This attracted a great deal of attention, but it had the unfortunate effect of preventing Donder's theory, diverting attention from the muscles, as the latter undoubtedly would otherwise have done. Thus, because of operative brilliancy, in spite of science, the false and antiquated muscle idea has continued to live, although Donders gave what, in the future, must prove ultimately its death-blow, by laying firmly the foundation of our modern conceptions of squint. With him began a new era, for he gave a scientific explanation of the occurrence of squint, but it is a mistake to suppose that nobody before Donders had questioned the idea of squint being a muscle affection. A hundred years before Dieffenbach, as far back as 1743, Buffon contended that it was a functional and not a mechanical trouble, but he was not able to bring forward clear mathematical and scientific reasoning for his contention, as Donders has done. M. de la Hire, and many others before Dieffenbach, possessed far sounder and more scientific views concerning squint. De la Hire believed that the squinting eye deviated because the most sensitive part of its retina happened to be away from the path of the optic axis, and that it was for the purpose of adjusting objects which were fixed by the other eye that the squinting eye took up a wrong position. He put; as it were, the cart before the horse, made the effect the cause, since what may be described as the eye trying to rig up as a sort of "jury macula" (false macula) is the effect of convergent squint and a late manifestation when fixation of the squinting eye is lost. However, it shows that even in days long ago scientific minds, unbiased by operative brilliancy, were not at all satisfied with mechanical ideas concerning squint, and, indeed, they were groping after the light we now possess. It is to Dr. Emil Javal we owe much of our knowledge concerning the true nature of squint, besides much light thrown by him on its rational and now operative treatment. In his "Manual of Strabismus," published in Paris in 1896, he brought forward evidence to prove the value of stereoscopic exercises, bar reading and other orthoptic exercises for the eyes. Parinaud, three years later, wrote an excellent treatise on the subject. Indeed, much of the good scientific work has been done by the French, whereas English and even German minds have been satisfied with operative technique, to the neglect altogether of non-operative

treatment. Recently, however, Professor Edgar Browne and Dr. E. Stevenson, of Liverpool University, published an essay on the subject, which is so good that it seems a pity there is not more of it. The second edition of a larger work was published a year ago by Mr. Claus Worth, who shows the importance of the faculty of fusion in regard to binocular vision. He has invented a special kind of instrument which he calls an amblyoscope. It is valuable and, in many instances, accomplishes its purpose, that of the fusion of images seen through its two tubes, and thus the cultivating and developing of binocular vision. The instrument is something more than a mere variety of stereoscope.

Operation can not restore binocular vision; it has been well known for years past that vision is not improved by operations on the muscles; it can only improve matters for the artist and the admirer of beauty; it can not cure the amblyopia. Whereas fusion training and orthoptic exercises preserve vision, prevent amblyopia, develop the fusion faculty and gradually, in a physiological manner, do all that operation can be expected to do cosmetically, without the risk of any ill effects. It is true that operative interference is called for in bad cases where other means have been neglected or have failed, that there are several serious obstacles to success in the non-operative treatment, but on the other hand, those obstacles are not insurmountable, and the fact remains that the ideal and scientific treatment of many squint cases is not operation, but cultivation of normal binocular vision. Judicious operative procedures at the most favorable time are, undoubtedly, useful sometimes, but there should always be beforehand, along with an intelligent appreciation of the true pathology of the affection, an attempt to bring about, by patient perseverance in optical measures, an amelioration of the underlying functional conditions. Dr. Parinaud strongly condemned senseless operative interference. He writes: "I am far from denying that great improvements have been realized in the surgical treatment of strabismus, but it is a mistake to wish to reduce its treatment to a mere question of operative technique. Precision should be sought, on the one hand, in acquiring a deep knowledge of tne pathology of strabismus and, on the other hand, in the analysis of the mode of action of our operations. It is manifest that in directing our operations against a muscular affection that has no existence, we have done up to now what we have never meant to do. How can precision ever be found in a path thus manifestly a wrong one?"

To summarize the object of this paper is to emphasize the value of the non-operative treatment of squint in children. I do not condemn operations in their proper sphere, which is entirely that of improving appearances later on in life after the mischief to the vision of one eye has been done. Amblyopia is the worst thing about squint, worse than the deviation, which is bad enough. Operation may cure the latter, nothing but the proper exercise and development of binocular vision in childhood can cure or prevent the former. Cases have to be taken in time, before the vision has become too impaired. The more important part, therefore, of the treatment of squint is non-operative, and the operative is, although important in its proper sphere, later, and of secondary value.

Many cases of squint depend upon the failure to properly blend together the two retinal images to form one in the brain—*i. e.*, the fusion faculty. There is a lack of development of this faculty which is purely psychical, and the relative misplacement of the eyeballs does not show any anatomical changes in the ocular muscles.

The non-operative treatment of squint consists of exercises by means of the amblyoscope, the stereoscope, bar reading, the covering of the "good" eye, the instillation of atropine drops into the good eye, bimanual drawing, and other measures of value, including the correction of any error of refraction.

Herewith please find one dollar to pay for the BRIEF. The BRIEF and myself are intimate friends. With best wishes, I am your old subscriber.—I. K. FRAZER, M. D., Rusk, Tex.

[Written for the MEDICAL BRIEF.]

Clinical Diagnosis of Early Syphilis.

BY GEORGE P. CRUME, M. D.,

Professor of Dermatology and Genito-Urinary Diseases in the Medical Department of Hamline University.
Minneapolis, Minn.

During the last decade of the fifteenth century, syphilis made its appearance in Europe. Through the interchange of geographical discovery and international traffic, its spread was rapid and extensive; severe epidemics occurring. These visitations attracted attention, and we find much reference to it in the medical literature of that period.

But the origin of syphilis is, undoubtedly, far more remote, symptoms scarcely to be distinguished in the descriptions from those of syphilis, are described in the ancient literature of several nations, and in the sacred writings of the Hebrews.

Pathological changes in the bones, supposed to have been caused by lues, have been found in the skeletons of prehistoric man.

In spite of the fact that syphilis is not only one of the oldest diseases to which man is heir, but one of the more common, in spite of the fact that a large number of our ablest medical men have devoted much study and consideration to this disease, the cause of many of its manifestations remains unexplained.

The quality of the venereal ulcer was not generally recognized and accepted until the latter half of the nineteenth century, and even to-day the mixed sore occasions much obscurity and some mistakes.

In this paper I shall follow the device of Ricord, dividing syphilis into three stages, realizing that this division is purely artificial, but hoping that it will serve to make statements more clear.

The first stage begins at the moment of inoculation, and ends with the first appearance of the exanthem; the second stage begins with the eruption and continues for one or two years. The third stage includes all manifestations occurring after two years, and is usually referred to as late syphilis.

The symptoms of syphilitic diseases are evolved in a determinate order, and by considering its manifestations from the moment of infection we can best grasp those points by means of which the diagnosis is established.

The acquired disease, excepting, perhaps, conception syphilis, always begins with a chancre, which appears invariably at the point of inoculation, after a characteristic period of incubation—the average and most frequent duration of which is twenty-one days. The limits of this incubative period are from ten to seventy days, never less than ten days. The resulting chancre points to an infection within the month preceding its appearance, and during that time there is no evidence of disease unless the chancre was preceded by some morbid condition. There is no single lesion, the appearance of which invariably signifies that a chancre is present.

Induration is nearly always present in the initial lesion, and is the most distinguishing feature of the chancre. It is usualy evident in five to ten days after the first appearance of the chancre, and varies greatly in degree, sometimes hardly appreciable to the touch, while again, it may have a woody or cartilaginous feel. The degree of induration varies with the location of the chancre, and the accidents of its environment, and gives rise to the different types of primary lesion.

A common form of the initial lesion, uncomplicated with purulent infection, is known as the superficial erosion. It is circular or oval in shape, with an eroded, raw-looking surface, having a thin, serous or sero-purulent exudation, or it may be covered with grayish membrane.

A simple form of initial lesion is called the dry, scaling papule. This varies in size from a pea to a bean, and is brownish red in color, with a slight amount of induration.

In the Hunterian chancre, induration is especially marked; endarteritis occludes the blood vessels supplying the central part of lesion, and a coagulation necrosis occurs, causing a depression in the center, which is funnel-shaped, or like the crater of a volcano. Sometimes there is a very superficial layer of infiltration lying immediately under the skin. It

feels like a piece of stiff paper, and is called a parchment chancre.

True ulceration does not occur in the primary lesion without a mixed infection. The ulceration resulting from coagulation necrosis has sloping and adherent edges, not undermined, and does not extend to periphery or induration. The chancre is not a destructive sore and, as a rule, is not followed by a cicatrix; the ulceration resulting from endarteritis is in newly-formed neoplastic tissue, and from it no scar, or very little, results.

The chancre is not auto-inoculable, consequently we have, as a rule, a single lesion, unless more than one abrasion was present at time of infection, in which case we may have two or more developing at same time.

Adenopathy is an invariable accompaniment of the primary lesion, becoming manifest in from five to ten days after the appearance of the chancre, and always in those lymphatic glands in closest anatomical relation to the chancre. The glands vary in size from a buckshot to a pigeon's egg, are firm and hard in character, freely movable under the skin, not painful, and very rarely suppurate.

Another important step in determining the character of a suspicious sore, is the examination of the individual from whom the patient acquired the lesion, as to the presence or absence of syphilis.

The primary lesion is often a trivial sore, causing little pain, and disappearing in two or three weeks. When a severe lesion occurs and treatment is not applied, it may last several months.

The average time that elapses from the appearance of the chancre until the eruption is seen is forty-two days; the limits of this secondary period of incubation are from two weeks to six months. During this time the blood is becoming saturated with the virus, and frequently we find certain prodromata preceding the secondary manifestations. The most constant are anemia, due to destruction of the red-blood cells; lassitude; rheumatic pains in the bones and muscles; headache, which occurs toward evening, becoming more severe at night, and is not relieved by ordinary remedies; erythem of fauces; fever, the evening temperature reaching 100° to 101° F. During this time the adenopathy is becoming more marked and more general, and is the most common symptom of the secondary incubative period.

This brings us to the consideration of the phenomena of the second stage, and has to do more particularly with the eruptions of skin and mucous membranes. The cutaneous manifestations depend upon two distinct pathological conditions —one the hyperemia, and the other the cellular infiltration. Both of these changes are present in every eruption; in the earlier ones, the hyperemia is more marked, the later the cellular infiltration.

Syphilis is known as the great imitator, and its eruptions may very closely resemble those of almost every well-known skin disease; there are, however, certain characteristics of the eruption, taken as a whole, which will generally make a diagnosis possible. The general features of early syphilitic eruptions (those occurring in the first six months) are as follows:

1. They are superficially seated and generally distributed over the body, appearing first upon the chest and abdomen.
2. They develop slowly, and are not attended by subjective sensations.
3. They are symmetrical.
4. They are polymorphous; macules, papules, pustules, often being present at the same time.
5. They tend to disappear spontaneously by absorption.

The features of the late secondary eruptions are as follows:

They are more deeply seated, often involving the whole thickness of the skin and subcutaneous tissue.

While they may be generally distributed, the relapsing eruptions are never so numerous as the earlier ones.

They are less apt to be absorbed, but tend rather to break down and ulcerate.

The color of the eruptions is by no means characteristic. The early erythema is usually a dusky red, and disappears entirely under pressure; as the lesions grow older more pigmentation occurs, and they cease to entirely disappear under pressure. The color is commonly likened to that of an old copper cent, or the lean of raw ham, but such changes are common

in chronic inflammations of the skin due to other causes.

The eruptions may be classified according to the usual order of their appearance, as follows:

Macular syphilide, commonly known as syphilitic erythema or roseola. This is usually the earliest and most common lesion of the skin. It makes its appearance about forty-two days after the chancre, or nine to ten weeks after the infection. Hyperemia is the marked feature of this eruption, which consists of numerous rounded or oval ill-defined spots, varying in size from a split pea to a ten-cent piece, or larger. They are not elevated above the level of the surrounding skin. Their color is, at first, a rose red and, later, a brown shade. Cooling of the surface makes the eruption more conspicuous. It appears first upon the chest and abdomen and flexor surfaces, and gradually becomes general. It reaches its height in one or two weeks, and lasts from four to six weeks, without treatment.

The diagnosis of the macular syphilide is much simplified by the presence of concomitant signs of the disease. At this time the remains of a chancre are usually present, general adenopathy is evident, and we may find slight fever, angina and mucous patches.

Papular Syphilide.—The lesions of this eruption appear as hard, accuminate or flat, rounded elevations, varying in size from a pinhead to a ten-cent piece, and are classified as the small or large papular syphilide. The small papular syphilide is usually an early manifestation of constitutional syphilis, occasionally preceding the roseola. The papules may be conical, rounded, flat, or umbilicated, and vary in size from that of a pinhead to that of a split pea. At first rose red, later becoming coppery in color. This eruption is usually well marked and involves a large surface.

The large papular syphilide may be conical or flat. The large conical papules are usually discrete, few in number, associated with the small papules, and are most abundant on the back, glutæal regions, calves, and exterior surface of the arms.

The large, flat papules vary in size from that of a split pea to a five-cent piece. The borders are sharply defined and the lesion elevated above the surrounding skin, firm in consistence, and present a scaly or smooth, shining surface.

These lesions usually occur in the middle and latter part of the secondary stage. They may be widely distributed or grouped in certain regions, as the back, nape of the neck, flexor surfaces of the extremities, mucus outlets, the forehead, and surfaces that are in coaptation or are moist. The presence of papules on the forehead, along the hair margin, constitutes what is classically known as the "corona veneris." The papular syphilide, owing to certain changes, may become either the moist papule or the papulo-squamous syphilide. The moist papule is peculair to syphilis, and develops ordinarily from a dry papule. The metamorphosis consists in a loss of the epithelial covering, due to friction, the presence of perspiration and irritating secretions. A moist, secreting surface is left, the moist papule, which is commonly termed a condyloma, and is of special clinical importance on account of its frequency, its diagnostic significance, and the fact that its secretion is highly infectious.

Macules and a few pustules are usually present with the papular syphilide.

The Pustular Syphilide.—This usually develops from the papular eruption, in neglected cases and debilitated subjects. The most common time for this eruption is late in the secondary stage. When occurring early, it indicates a severe form of syphilis. The pustules vary in size from a split pea to a twenty-five-cent piece. They may develop on any skin surface, but are usually few in number and more frequently located on the face, the scalp and legs. When pustular lesions heal they leave morbid pigmentations, which gradually fade or leave permanent cicatrices.

The Pigmentary Syphilide.—This is rather a rare manifestation, occurring as a distinct expression of the disease, not being secondary to a papular or pustular eruption. It occurs much oftener in women than in men, and may co-exist with other lesions of the skin or mucous membrane. Its color varies from a light yellow to a deep brown shade. Its most common location is the sides of the neck,

though it may be found on the chest, the flexor surfaces of the limbs, and the forehead. It lasts for several months, never scales, and gradually fades, the skin resuming its natural color. This eruption is little influenced by treatment.

Involvement of the mucous membrane of the mouth and pharynx is one of the most common and constant symptoms of constitutional syphilis. It occurs as one of the earliest secondary manifestations, and may continue to re-occur during the secondary stage. It may appear in the form of an acute erythema, involving the palate, half arches, tonsils and pharynx, closely resembling a catarrhal sore throat. The most common form of involvement of the mucous membrane is the mucous patch, commonly located on the tongue, buccal mucous membrane, half arches and the tonsils. At first the mucous patch appears as a pearly white or grayish white round spot, not elevated. As usually seen, the pellicle of mucous membrane has sloughed off, leaving a shallow, sharply-defined "punch-out" looking ulcer. Together with the mucous patch, there are often erosions and fissures of the tongue. In order to differentiate the mucous patch from ordinary aphthous spots it is often necessary to take into consideration the history of the case, and the presence of other signs of syphilis.

Alopecia frequently occurs in early secondary syphilis. It results from the impaired nutrition of the hair follicle, and occurs as general thinning or bald spots. Usually the scalp, as sides and back of head, and the eyebrows are alone affected. The broken arch being very significant of syphilis.

In conclusion, I should like to emphasize the three most reliable diagnostic points of the primary stage which are:

1. Period of incubation exceeding ten days, the average of which is twenty-one days.

2. The induration of the base of the chancre, which is often cartilaginous in character, and feels like a foreign body under the skin.

3. The indolent and painless swelling of the nearest lymphatic glands.

815 Andrus Building.

[Written for the MEDICAL BRIEF.]

Streptococcus Sore Throat (Pseudo-Diphtheria).

BY F. E. WAXHAM, M. D.,

Professor of Medicine, Clinical Medicine, Laryngology and Rhinology in the University of Colorado.
Denver, Colo.

As its name implies, streptococcus sore throat (pseudo-diphtheria) is an infection by the streptococcus. It is a dangerous condition and should be distinguished from diphtheria or folliculitis at the earliest possible moment. This differentiation is conclusive only after bacteriological investigation. Clinical symptoms differ somewhat from those of true diphtheria, but even these symptoms are not absolutely reliable in making a diagnosis.

In this condition the pharynx is more affected than the larynx. The disease is ushered in by the usual symptoms of a general infection. Chill is usually the first symptom, followed by swelling of the tonsils, high fever, rapid pulse and aching of the limbs. The membrane resembles that of diphtheria to a certain degree, but is not so extensive as in the latter disease; the pain in the surrounding tissues is more intense and the inflammation greater than in diphtheria. Unlike folliculitis of the tonsils, there is ulceration and an exudate occupying the site.

In the streptococcus infection we rarely get the fluctuation which occurs so frequently in parenchymatous tonsils. Diphtheric antitoxin has little, if any, effect in arresting the disease, although the streptococcic serum, when given in full doses and often repeated for a number of days, will frequently relieve the condition or retard its progress.

The disease usually runs a course of from ten days to weeks, but death not infrequently occurs inside of a week, and many of these cases prove fatal in spite of all treatment.

The most dangerous complication is acute nephritis. The kidneys are almost invariably involved in this disease, and there must be suitable treatment for this condition.

Fortunately, the disease is a rare one. I have seen quite a number of cases, two of which proved fatal. One case, which occurred two or three months ago, made a slow but complete recovery after we had practically abandoned all hope. The serum treatment in this case proved ineffective, there was acute nephritis throughout the course. Bacteriological examination confirmed our diagnosis, and microscopical investigation revealed the streptococcus instead of the Klebs-Loeffler bacillus.

Treatment.—Treatment is supportive. Nourishment and stimulation are most important factors in the treatment of this disease. The anti-streptococcus serum is indicated. Strychnia and nitro-glycerine are aids in treatment. As stated, the kidneys usually demand attention throughout the disease.

Prognosis is unfavorable; particularly so if the disease is not recognized early and treated accordingly. Our main hope lies in the early diagnosis, which can only be satisfactorily made by means of the bacteriological investigation. The prompt use of anti-streptococci serum in the earliest stages, with suitable nourishment and stimulation, and proper care of the kidney complication, will often tide the patient through this dangerous condition.

Jackson Building.

[Written for the MEDICAL BRIEF.]

Concerning the Prevention of Typhoid in Military Practice.

BY S. P. KRAMER, M. D.,

Late Major and Surgeon U. S. A.; Lecturer on the Principles of Surgery, University of Cincinnati. Cincinnati, Ohio.

I shall, no doubt, be regarded as heretical by many of my friends when I mildly suggest that the cause for our failure to prevent typhoid fever during the Spanish-American war, may be found in our lack of definite knowledge concerning the method of spreading. My belief in this respect is based on the following history:

Previous to 1898 the profession was practically united in the view that the water supply was the principal medium through which typhoid fever was spread. In fact, we heard nothing else.

In 1898, we took the Seventh Army Corps to Jacksonville, Fla. We extended the water mains of the town (supplying artesian water) to the camp, so that every company had hydrant service, and the only water consumed was the same as that supplied to the 25,000 inhabitants of Jacksonville, a water positively free from contamination. The city itself was practically free of typhoid fever, while the Seventh Army Corps had a very large percentage of morbidity from that disease. It was then that we became convinced that typhoid was not necessarily a water-borne disease, and it was then that the fly theory became prominent as a substitute.

In the report of the chief surgeon of Admiral Togo's fleet, as presented by our distinguished colleague, Admiral Zuzuki, we are informed that in a command of twenty-five thousand men, consuming sterile, distilled water, with a sewage disposal that was ideal (in that it went into the sea as soon as voided), protected by the exigences of war from outside contamination, there was a morbidity from typhoid of nearly one per cent; a morbidity which, had it occurred in the city of Detroit, would have yielded three thousand five hundred cases, and would certainly have been considered an alarming epidemic.

If the Japanese army in Manchuria had no typhoid epidemic, and the Russian army none, and it appears from the report of Colonel Havard that such was the case, they were fortunate. But is it fair to assume that the absence of typhoid in the Japanese army was due to the excellence of their sanitary organization, or that the same absence in the Russian army was due to the poor sanitary organization, and that the presence of typhoid in the American army during the Spanish-American army should be laid entirely at the door of the line officer who failed to heed the suggestion of the medical corps? Such an assumption is scarcely logical, and I think it would be wiser for us to take the position that our knowledge on the subject is as yet inexact. If the armies in Manchuria had no typhoid, it behooves us by patient and scientific inquiry to determine why, rather than to

indulge in polemics at the expense of the reputation of our own army.

We meet with no opposition from the officer of the line in our management of variola or diphtheria. Here we have accurate knowledge, so that all men can see: there is no question; our recommendations are obeyed to the letter.

Much has, likewise, been said and written in the way of invidious comparison regarding the care of the sick in the Japanese and American armies. Let us look, for a moment, on this side of the subject.

During the Spanish-American war we had a mortality from typhoid of about seven per cent. Where will you find anything better than this? Certainly not in the Japanese army, and scarcely in the best civil hospitals of any nation. Now, if a low mortality from typhoid fever means anything at all, it means a high degree of efficiency in the care of the sick, since it is that and nothing else which keeps the mortality down.

Nor has our army medical administration escaped criticism; much of it, I may say most of it, undeserved. As an instance of our lack of efficient administration, Major Seaman quotes the fact that when he went to Porto Rico, he begged for a microscope and could not get one. I want to say that when I went to Cuba, in the service of the army, I did not beg for a microscope, I took one along. I refer to this only for the reason that I desire to emphasize the fact that no amount of administrative care will remedy a lack of individual effort.

Just at present the medical profession is suffering from a wave of organization fever. We preach that all the ills that threaten mankind will be prevented by a proper organization of the medical profession, and its proper recognition of the laymen. But I think it will be found, in the long run, that preventable diseases will not be prevented by polemics, but by a careful and conscientious inquiry into their causes and methods of propagation.

21 Garfield Place.

Enclosed find one dollar for a continuation of the MEDICAL BRIEF. Long live the BRIEF and its family.—L. F. BIESMEYER, M. D., Westphalia, Mo.

[Written for the MEDICAL BRIEF.]

The Value of the X-Ray in the Early Diagnosis of Osteomyelitis.

BY SAMUEL B. CHILDS, A. B., M. D.,

Professor of Anatomy Denver and Gross College of Medicine; Radiologist to St. Luke's, Mercy and City and County Hospitals.
Denver, Colo.

I have been prompted to bring this subject before you on account of the comparative frequency of the disease and, furthermore, from the fact that in many cases we are unable to make a diagnosis by the ordinary methods of palpation and inspection; or, if a diagnosis can be made, it is impossible accurately to locate the focus of the disease until extensive destruction of the bone has resulted.

It is an easy matter, generally, to make a diagnosis in an old case of osteomyelitis when extensive proliferation of the bone has taken place, or when one or more sinuses are leading directly into the

FIG. 1. Left Leg. Antero-posterior view, antero-posterior half of right leg. Right leg showing the marked enlargement of the tibia and also of the fibula; enlargement of the tibia and three light spots which were the seat of pus foci.

cavity of the bone, but if we stop to think for a moment how much suffering and loss of time this has entailed upon the patient, and how much time is yet required before recovery is complete, we are forced to admit that nature has made the diagnosis for us, and that the patient has paid very dearly for that diagnosis.

There are two well-recognized forms of osteomyelitis, the acute and the chronic. In the former we have an acute infectious process caused, in the majority of cases, by the staphylococcus pyogenes aureus, and in these cases death not infrequently

results in a few days from pyemia or septicemia. In the milder cases, complete resolution may take place in a few weeks, or destructive changes may occur in the bone, giving rise to one or more localized abscesses in the medullary canal, or ne-

FIG. 2. Lateral view of left knee. Femur, marked roughening of the bone with thickening, three inches above the knee joint, enclosing a diamond shaped area which was the seat of the pus cavity.

crosis of the bone adjacent to the affected medulla. Considerable time may be required for these changes to take place. Occasionally the disease may be, apparently, dormant for a time, only to reappear with renewed vigor in pursuing its destructive course. When an abscess has resulted, there is an accompanying characteristic thickening of the bone near the focus of the disease, and, frequently, there is associated with this process a periostitis, so that in any case there may be coexistent an osteomyelitis, an ostitis, and a periostitis.

Osteomyelitis occurs more frequently in men than in women, and the long bones furnish a favorite locality for its development, especially the femur and tibia.

An injury to a bone may furnish a suitable location for the development of an acute osteomyelitis. It has also been observed, as a sequela of the acute infectious diseases, such as diphtheria, scarlet fever, measles and typhoid fever, as well as acute suppurative diseases of other organs.

In the chronic form, a tubercular, syphilitic or actinomycotic inflammation can produce the disease, in addition to the causes enumerated under the acute form, and under the heading of injuries to a bone I would particularly mention compound fractures.

The form of osteomyelitis that I wish to consider is that in which some comparatively slight destructive change has taken place in the texture of the bone or medulla, which process may be characterized either by one or more spots of local softening of the bone structure, or where there are one or more foci of destruction of the bone, accompanied by the formation of a grumous serum or pus, prior to any extensive thickening of the bone, or possibly, any change which may be palpable.

A few explanatory words of the action of the X-ray in helping us in a diagnosis of these conditions may be permissible at this time.

A skiagram is a shadowgram. The inorganic salts, which are normally present in a bone, which give to the bone its firmness and solidity, offer such an impediment to the passage of the X-ray that a more or less dense shadow is engrafted upon the photographic plate. The denseness of the shadow being proportionate to the volume and intensity of the ray employed. Assuming, then, that the X-ray has had sufficient volume and intensity in any given case, there is depicted upon the sensitized plate the normal grain (so to speak) of the bone, and it is as apparent as the grain in many varieties of wood. Any change from the normal grain of the bone should at once attract our attention, and in these cases where

FIG. 3. Lateral view of the middle of the right; marked roughening and thickening of the bone is presented. White area in the center of the picture shows the site of pus cavity.

there is a loss of the bone structure, with or without the formation of pus, there is at these points a less resistance to the passage of the ray, and, consequently, a darker or thinner shadow on the plate.

It is by means of this principle that the X-ray can demonstrate accurately slight changes from the normal shadows, and it is up to the X-ray operator to interpret these changes correctly, with the added aid of the clinical symptoms in the case. Pain, however, which is generally present, is oftentimes referred to a neighboring joint; while, in reality, the focus of the disease is situated in the shaft of the bone, some distance from the joint, as is well illustrated in three of the cases that I report, so that the location of the disease from the seat of pain is unreliable, and the X-ray findings must be judged independently of this one symptom.

If the disease is shown to be limited to a certain area of the bone, this alone should be explored by the surgeon and

Fig. 4. Antero-posterior view of the lateral end of the right tibia and fibula, showing marked nodular condition of the bone. The light areas indicating pus cavity.

he can finish his work with the reasonable assurance that the rest of the bone is not affected, a satisfaction rendered possible by the aid of the X-ray.

Case 1.—Referred by Dr. George B. Packard. Girl, aged twelve. For the past year had not been feeling well, and had been treated for a considerable part of that time for rheumatism. General condition was poor, had lost flesh, and at the time of examination was complaining of pain, which was chiefly referred to the right knee joint. Some thickening of the femur above this joint was palpable. Diagnosis, osteomyelitis of left femur, with an area of softening two inches above the inferior articular surface. Operation was performed by Dr. Packard, July 12, 1903, and well-marked eburnation on the inner side of the lower end of the femur was found. Having chiseled through this, a small cavity was found, from which about one drachm of pus evacuated. This area of softening was found, as indicated by the skiagram, two inches above the inferior articular surface of the femur.

Case 2.—Referred by Dr. C. A. Powers. (Illustration No. 1.) Male, aged thirty. In the latter part of 1902 patient sustained a compound fracture of both bones of the right leg above the ankle. It was nearly two years before union took place in the bones and the skin openings healed. He has had pain continuously near the seat of fracture since the original injury, is unable to bear the weight of his body upon this leg, on account of the increased pain. He has lost some weight. An ulcer was present at the time of examination on the inner side of the leg, about four inches above the internal malleolus. Skiagram was made November 2, 1905. Diagnosis, osteomyelitis, with an area of softening four and one-half inches above the internal malleolus. Operation performed by Dr. Powers, November 6, 1905, and conditions found as shown by the X-ray.

Case 3.—(See illustration No. 2). Referred by Dr. Leonard Freeman. Male, aged twenty-two. In 1889, patient was hit by a hatchet just above the left knee. Was four years in recovering from this injury. During this time small spiculæ of bone worked out two or three times in this locality, but patient had no further trouble with the leg until about October 1, 1905, when pain developed which was most marked in the left internal condyle and knee joint. No swelling was noticed in this region until about November 1. Some stiffness of the joint was present at that time. Skiagrams were made November 11, 1905. Diagnosis, osteomyelitis of the lower end of the femur, with an area of softening two and one-half inches above the articular end of the internal condyle. Operation was performed by Dr. Freeman, November 15, 1905, and the area of softening was found at the point indicated by the X-ray. A little over a drachm of pus was evacuated from this cavity.

Case 4.—(See illustration No. 3). Referred by Dr. Leonard Freeman. Male, aged forty-four. When patient was eight

years of age was confined in bed for about ten weeks by an abscess in the lower end of the right femur. Abscess finally broke above the condyles and several pieces of bone worked out from either side of the thigh in this locality. This process consumed about three years of time. No

FIG. 4A. Lateral view of the right tibia showing nodular condition of same. Several isolated small white spots show the areas of bone softening.

further trouble was experienced until eight years ago, when he had an attack of so-called rheumatism in the neighborhood of the right knee. Was laid up in bed for four weeks at this time. The symptoms, however, were of about the same character as those complained of at the time of my examination. In July, 1905, was obliged to quit work on account of the pain in his right knee, and has been confined to the house since that date. He has lost much weight, has no appetite and looks anemic and sick. His pains are mostly at night, and are referred, chiefly, to the right knee and hip joints. Tenderness over the middle of the shaft of the femur can be elicited by firm percussion. Patient is unable to bear his weight on his right foot on account of the pain on the inner side of the knee. Skiagrams were made November 26, 1905. Diagnosis, osteomyelitis of the right femur, with an area of softening commencing five and one-half inches above the articular ends of the condyle, and extending for about four inches toward the hip joint. Operation was performed, December 4, by Dr. E. F. Dean, Dr. Freeman having referred the case to me during Dr. Dean's absence from the city. The area of softening was found at the point indicated by the X-ray, and one and one-half ounces of thick, heavy pus were evacuated.

Case 5.—(See illustrations 4 and 4a). Referred by Dr. I. B. Perkins. Male, aged fifty-two. When forty years of age patient fell from a step ladder and sustained an injury of his right leg. Ever since that time has suffered with intermittent pains in that leg, principally at night. Two years after receiving the injury the bone became enlarged, and fourteen months ago a discharging sore appeared upon the leg, which, however, responded to systemic treatment and healed. A history of syphilis of twenty-five years' standing was obtained. The pains in the leg have continued up to the present time. An ulcer was present on the inner side of the tibia about three inches above the internal malleolus, but a probe could not be passed down to the bone. Skiagrams were made November 29, 1905. Diagnosis, ostitis of tibia, with several small areas of softening, commencing three inches above the internal malleolus and extending up the leg for a distance of about

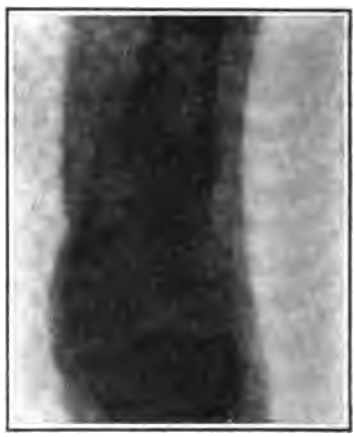


FIG. 5. Antero-posterior view of right femur showing resulting union from compound fracture. The two light areas on either side of the middle line, about three inches above the knee joint show the seat of the two pus cavities that were present.

three and one-half inches. Operation was performed by Dr. Perkins, December 7, 1905, and areas of softening, as indicated by the X-ray, were readily found.

Case 6.—(See illustration No. 5). Referred by Dr. C. A. Powers. Male, aged

forty. In January, 1904, patient sustained a compound fracture of the femur in its lower third. Was operated upon at that time and several fragments were removed. Since then a sinus has persisted above the internal condyle. Since the injury there has always been considerable pain above the knee joint and the inner side of the thigh. The motion of the joint is restricted. Was operated upon in July, 1905, when the sinus and bone cavity were thoroughly curetted. In September, 1905, a similar operation was performed. Skiagrams were made December 12, 1905. Diagnosis, osteomyelitis of the lower end of the right femur, with two areas of softening, one on the inner and the other on the outer side of the femur, each three inches above the articular surfaces of the condyle. Operation was performed De-

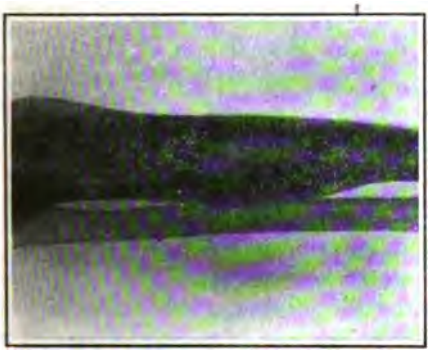


FIG. 6. Lateral view of left tibia and fibula. The middle of the picture shows the marked thickening that was present in the tibia, and the light area indicates the site of the bone softening.

cember 21, 1905, by Dr. Powers, and a softened cavity containing grumous pus, was found on the outer side of the femur, at the point indicated by the X-ray, and a larger cavity was found on the inner side, with which the sinus on the outer side of the thigh communicated, as is shown in the skiagram.

Case 7.—(Referred by Dr. George B. Packard). Girl, aged sixteen. Pain and tenderness had been present over the right trochanter for about four months. Patient had been in bed for six weeks. Motion was not limited at the hip joint. No definite history of an injury. Skiagram was made December 15, 1905. Diagnosis, periostitis, with superficial softening of the great trochanter. Operation was performed December 20, 1905, by Dr. Packard. The periosteum was found very much thickened over the great trochanter, and the lower part of the great trochanter was found covered with an area of purplish granulation, and a small area of superficial softening.

Case 8. (Illustration No. 6.) Referred by Dr. C. K. Fleming. Male, age thirty-one. In September, 1904, patient fell from a bicycle, but was unconscious of any injury to his left tibia, but bruised his left hip, knee and ankle. In January, 1905, detected soreness in the upper part of the left tibia, but had had some rheumatic pains prior to this date, and did not pay much attention to this attack. In January, April, June, August and November, 1905, had periodical attacks of pain in that part of the left tibia, associated with fever and acute inflammation of the left leg, which confined him to bed from two days to two weeks. Skiagrams were made December 18, 1905. Diagnosis, osteomyelitis, with areas of superficial softening six inches below the inner tuberosity of the tibia, associated with a periostitis at these points. Operation was performed by Dr. Fleming, December 22, 1905. Pus was found beneath the periosteum, and the cortex of the bone was diseased, as indicated by the X-ray.

726 Fourteenth Street.

[Written for the MEDICAL BRIEF.]

Relationship of Dentistry to Medicine.

BY W. E. GRANT, M. D., D. D. S.,

Professor of Orthodontia and Dean of the Louisville College of Dentistry.
Louisville, Ky.

Probably no branch of general medicine has advanced in the last ten years as rapidly as that of dentistry. This is especially true in regard to the detail of the work undertaken, and the decided advance that has been made along the line of general technique, as well as the special technique of the various important operations. It is true, also, that more strictly scientific work has been brought about within the last few years than at any other period within our professional history.

I take it that there can be no doubt, in the mind of the thorough student, but

that any of the healing arts are but outgrowths of the parent profession of medicine, and recognizing this fact, dentists and other practitioners must work upon the idea of specialists of medicine, no matter what the collateral branches may be.

In addition to the general advance made in dentistry, as a department of medicine, it is also worthy of our notice to consider the advance in the science and art of orthopedic dentistry. It may be considered either from the standpoint of general dentistry, or as a branch almost distinctive within itself, yet dental in its make-up because of the mechanical features and ideas employed, or from a surgical standpoint as surgical procedure is often resorted to for the correction of these abnormal conditions.

To have announced, only a few years ago, that the entire facial contour and physiognomy could be changed without any ill results, either locally or affecting the general system, would have been considered impossible, yet these results are accomplished to-day, and their procedure accepted as a matter of course among the men working in this field.

So much has been found necessary in this department of dental irregularities that the general practitioner of dentistry has felt himself unprepared to meet the demands made upon him, and the work requires much time and constant attention, the busy practitioner finds it impossible to give the necessary time to the work, therefore much encouragement has been given to those who are doing this special work.

It is important that the general practitioner of medicine should realize the possibilities, and that the opportunities are to be had, for the complete restoration and positive correction of practically all the abnormal conditions about the mouth and face. He should also realize that, in many instances, it is important that these cases be referred to the proper specialist early in life, and even before they have come under the observation of the family dentist. Of course, the family dentist is in position to give a great deal of advice regarding the proper procedure.

Irregularities growing out of the presence of adenoid growths and their too long retention, are very common, and in the treatment of these conditions, the dentist associated with the aural and oral surgeon can accomplish great good.

It is not only important that these dental abnormalities be recognized early, but that an active campaign toward their correction and retention in the new permanent position should be carried out.

Much more could be said regarding irregularities in throat conditions, enlarged tonsils, the evils of thumb and lip sucking, all of which come under the observation of the general practitioner, but they will have to be considered at some future time.

Masonic Building.

[Written for the MEDICAL BRIEF.]

Signs and Symptoms of Pregnancy.

BY ROBERT B. ROME, M. D.,

Professor of Gynecology in the College of Homeopathic Medicine and Surgery, University of Minnesota. Minneapolis, Minn.

Considered from a medico-legal standpoint the diagnosis of pregnancy becomes one of deepest interest and utmost importance. Character, social position and legitimacy are at stake, and I can not too strongly emphasize the importance of being thorough in search for every available sign and symptom, and they are almost as many and as varied as the breezes on a changeable April day.

The most marked changes, as one would naturally expect, take place in the organs of generation. Yet there are general modifications or disturbances affecting the whole system, physical, psychical and spiritual.

We find that the initiation of a process of conception within the uterine cavity sets up a process of hypertrophy and hyperplasia of the muscular structures of the uterus, and this in turn gives added capacity to the cavity of that organ. The uterus at term is twelve inches long, nine inches broad, eight inches thick, and weighs about two pounds with a capacity of 400 cubic inches. The characteristic alteration is found in the veins of the uterus. These lose both external and middle coats, so that the intima is in direct contact with the muscular structure. This

is Nature's safeguard, for when the uterus is emptied no resistance from these walls enables the contracting muscular layers of the uterus to close the lumens of the bleeding veins, and in that way prevent hemorrhage.

The nerve supply becomes increased and sensitive. Lymphatics enlarge and become very active, so that septic material is easily absorbed.

Position of the uterus varies in the different periods of gestation. During the first month there is a descent also and anteflexion; following this change is a progressive rise of the organ until about two weeks before term, when there usually occurs what is called the "falling." This primary falling causes frequent micturition, as does this secondary falling. A slight rotation of the uterus on its axis from left to right takes place, due to position of intestines. This is called lateral obliquity of uterus. Increased mobility of the pelvic joints takes place.

Cramps of calves occur from pressure of gravid uterus on several plexus nerves. Varicosities and edema also occur from pressure of pelvic contents.

Blood is also altered, increased in quantity but decreased in quality—increase in white corpuscles and a corresponding decrease in the red corpuscles. Also a marked increase in fibrin takes place. This is another of Nature's precautions. This modification causes the blood to clot rapidly.

An increased amount of urine is secreted. Specific gravity is low, due to the watery condition of urine. No alteration in the amount of urea and solids. Traces of albumen and sugar are frequently observed. The traces of albumin are often due to vesical catarrh. The glycosuria is due to a lactosuria caused by absorption of lactose from the breasts.

Nervous symptoms usually occur. Vertigo, syncope, neuralgia.

Specific Signs and Symptoms.—There are four methods of diagnosis, and all four must be thoroughly practiced in different periods of gestation in order to make a positive diagnosis.

1. Interrogation.
2. Palpation.
3. Inspection.
4. Auscultation.

What may we learn by interrogation? We may learn that were we to depend upon this method alone we could be most magnificently deceived. And this might be voluntary and involuntary on the part of the patient. From questions, however, some facts may be learned in regard to the menstrual function. One or more menstrual periods have been missed. Frequent urination is complained of, also constipation or diarrhea. "Morning sickness," longings or "pica," as it is technically called. Also tingling sensations in the breasts, and enlargement of breasts.

By palpation we can discover indications much more certain. Very early in pregnancy Goodell's sign can be found. By this is meant a softening of the intravaginal portion of the cervix. The sensation imparted to the trained touch in case of pregnancy of two months is best described in Goodell's own words: "The end of the cervix will be as soft and velvety as your lip; if not pregnant as hard as the end of your nose." Of course, this is an arbitrary description, and what would be soft to the touch of one finger would be hard to another. Actual experience alone gives value to this sign.

The progressive growth is another sign we learn by palpation. The tumor of pregnancy, as it is called. This is a presumptive sign only. The antero-posterior flattening of the uterus disappears and the organ becomes globular or pear-shaped very early in pregnancy. The uterus rises progressively, so that at the end of the second month the fundus is on a level with symphysis above. At the end of fourth month fundus is found midway between symphysis and umbilicus. At end of sixth month on the level of umbilicus. End of seventh midway between umbilicus and ensiform cartilage. At end of eighth month on the level of ensiform cartilage, and eight and one-half months it begins to progressively fall until full term. Another valuable sign elicited by palpation is known as Braxton Hicks' sign; it is the rhythmic and painless contractions and relaxations of the uterine walls. It is these intensified that constitute the normal labor pains. They can be detected as early as the fourth month and occur whether the fetus is dead or alive. They are felt by simply grasping

the fundus between the palm of the hand externally. Their frequency varies between five and twenty minutes and lasting about a minute. This sign is presumptive only.

Ballottement is still another sign of great value, but is elicited only in the latter half of pregnancy. It is an absolute and positive sign of pregnancy when found with certainty. To witness it the uterus should be steadied by placing the hands on either side of the abdomen, and an impulse given to one hand, when, in a few moments, a shock is felt on the opposite side. This is called abdominal ballottement.

Cephalic ball: This sign is diagnostic of breech presentation. It is discovered by the swinging movement of fetal head at the fundus of the uterus. Palpation gives us also the vaginal pulse. This sign is found in high arterial tension of the parts and is merely presumptive in value.

Palpation furnishes another most valuable sign, almost positive of pregnancy, Hegar's sign. This sign is elicited in three different ways:

1. Hook down the cervix with a volsellum forceps, then pass the index finger into the rectum and the thumb of same hand into the anterior vaginal fornix. At the same time press the fundus down with the other hand.

2. Place index finger in the posterior vaginal fornix and firm pressure made with either hand just above symphysis.

3. Place finger in anterior vaginal fornix and pass fingers back of the fundus from above between the uterus and sacrum, bringing the lower uterine segment between the fingers of opposing hands. The sensation sought in all these ways is a soft, yielding sensation of that portion of the uterus called the lower uterine segment. This sign is of great value, but not positive. Sometimes it can not be found, and some cases require anesthesia. It can be recognized as early as the second and fifth months.

Another sign found by palpation is that of "uterine fluctuation, or Rosch's sign." Only a presumptive sign, caused by the liquor amnii, elicited by placing one finger in the vagina up against the lower uterine segment and the other hand on the fundus, giving the top to hand, and the fundus transmits it to vaginal finger.

The last sign found in palpation is the detection of the fetal movements—this is, of course, a positive sign of pregnancy. Fetal movements are not to be confounded with quickening. The latter is the initial movement, all subsequent are called fetal movements.

Inspection.—Is the third method and by it we discover important signs.

1. That of abdominal enlargement, not diagnostic, and yet always present in pregnancy in latter months. We notice the striæ caused by rupture of adipose subcutaneous, not always present, can be largely prevented by the inunction of oil when the walls first begin to stretch.

The umbilicus, at the sixth month, begins to protrude and continues to do so until the latter two weeks of pregnancy and then a slight retraction occurs.

Pigmentation of the skin is especially marked upon the abdomen in the form of a dark line, called *linea nigra*, which in the non-pregnant state, was called the *linea alba* or white line.

Jacquemin's sign is an early and valuable one, though not positive. It consists of a bluish and purple discoloration of the vaginal and vulvar mucous membrane. especially intense about the urethral orifice.

Chloasmata, liver blotches, especially found on the face of pregnant women.

Pigmentation of the mammæ. This is manifested in two ways—as the primary areola. This is very marked in brunettes, less so in blondes. Secondary areola, in latter half of pregnancy, developing outside the primary enlargement of the tubercles of Montgomery, are a strong presumptive sign of pregnancy.

The fetal movement can sometimes be seen, and then we have a positive sign. By the method, auscultation, we detect one absolute and positive symptom of pregnancy, namely, the fetal heart sound. The great drawback to this symptom, and we may say to all positive signs, they are certain only in the latter months of gestation, when so many of the presumptive signs are present that it is scarcely necessary to have positive ones. This sign is called Mayor's, since it was first pointed out by Mayor, in 1818.

Positive Signs and Symptoms.—1. Mayor's sign, the fetal heart sound. The pulse of the mother should be taken at the same time, so as not to mistake the pulsations of the abdominal aorta for the fetal heart sound. This sign or symptom has been detected as early as the fifth month.

2. Fetal movements, when ascertained, are also positive signs, but care must be used not to mistake the peristaltic movement of the bowels, or the sudden contractions of the abdominal muscles, for these movements.

3. Abdominal ballottement.

These three are positive of pregnancy.

It will be convenient to divide gestation into three periods of three months each, and ascertain what sign can be expected in these three respective periods.

1. Two signs and symptoms—menstrual suppression and morning sickness. You may look for the "four soft signs," so called, Goodell's, Hegar's, soft uterine body, and soft and enlarged mammæ with dark areola.

2. Together with the foregoing, you will find Jacquemin's sign, Braxton Hicks' sign, ballottement and quickening.

3. All the foregoing still more marked. Fetal movements and Mayor's sign.

Andrus Building.

[Written for the MEDICAL BRIEF.]

Cerebellum.

BY SILAS HUBBARD, M. D.,
East Aurora, N. Y.

Various have been the views of different physiologists as regards the functions of the cerebellum. One author suggested that it co-ordinated muscular action; another said it presides over nutrition and perfection of the physical frame. Dr. Gall said it was the organ of amativeness. Dr. Kirk, of Mississippi (MEDICAL BRIEF, Vol. XXXIV., page 661), says it is the organ of vitality. I suppose he ought to call it vitativeness. His method of measurement of the organ is not as good as Dr. Gall's, viz., from the opening of the ears to the occipital protuberance.

There is a glimmering of truth in all these different statements of physiologists. The statement that it presides over the co-ordination of muscular action was plausible to the author, because when diseased or wounded it produced ataxia, and a person with small cerebellum is more liable to chorea, ataxia, and eclampsia.

Then I will say for the physiologist who says it presides over nutrition and the perfection of the physical frame, that where the individual has it large, he has a large neck and a stout, muscular build, and this is about all that seemingly favors Dr. Kirk's theory; but they do not live any longer than people with moderate or average cerebellums. Women have smaller cerebellums than men, yet the average of their lives are longer than that of men. The bull and stallion have larger cerebellums, respectively, than the ox, gelding, cow, and mare, yet their lives are no longer.

Now, as regards Dr. Gall's theory that it is the organ of amativeness, I would say that the adult who possesses it large in his day and generation has a large neck, stout, muscular frame, and much animal force and, of course, *ceteris paribus*, could endure greater sexual excesses than one with a moderate cerebellum and a consequent slender constitution.

Dr. Gall, the professed discoverer of amativeness, had the cerebellum large, although he died at seventy years of age, while I know many octogenarians still living who have the cerebellum moderate or average.

The large cerebellum is an effect of vitality and not a cause. In a family of children the older ones generally have larger cerebellums and are larger and stronger physically than the younger ones, because the young parents have more vitality than the old parents. For the same reasons the young parents produce more children with supernumerary teeth, fingers and toes, etc., than old parents.

The cerebellum is not the organ of vitativeness, or love of life. If there is such an organ, it is in convolutions immediately above the opening of the ears, causing breadth through that region. The feline species, especially, have it large; while the herbivora have it moderate, while the carnivora, in general, have it large, and among mankind those who make the best fight for physical life have it large.

[Written for the MEDICAL BRIEF.]

Leprosy.

BY FREDERICK H. DILLINGHAM, M. D.,

Adjunct Professor of Dermatology New York Polyclinic Medical School and Hospital; Dermatologist St. Francis' and St. Joseph's Hospitals; Formerly Assistant Sanitary Superintendent of the Department of Health, City of New York, Etc. New York City.

Leprosy is a chronic infectious disease, caused by the bacillus lepræ, which was discovered by Hansen in 1874. There are two forms: the tubercular, characterized by the presence of tubercular nodules in the skin; and the anesthetic, where the changes take place in the nerves. Besides, we have a combination of the two.

The tubercular type is the most severe. The period of incubation may last months or years. The patient then becomes depressed, complains of weakness, diarrhea, sweating and other definite symptoms, which are followed by a chill and intermittent fever. Temperature may reach 104° F.; pulse is rapid and weak and there are pains in the extremities. After these symptoms have lasted some time there is edema of the eyelids, ears and face or limbs, followed by erythematous lesions, which are elevated, sharply limited, hyperesthetic, and may be one to six inches in diameter. Sometimes these patches develop without premonitory symptoms. They may persist, showing marked infiltration, or disappear only to reappear with febrile symptoms. Later, brownish papules appear on the inside of these lesions; these may enlarge to the size of a hen's egg. The hyperesthesia subsides and is replaced by diminished sensibility or anesthesia. The mucous membranes become involved. The nodules and infiltrated patches either persist indefinitely, or undergo absorption, leaving an atrophy, or break down, forming ulcers, which are shallow or indolent, with a viscid discharge.

The ulceration may affect various joints, especially the fingers and toes, causing necrosis and loss of the bones. The glands of the neck, groin and axilla become enlarged and often break down. The hair, with the exception of that of the scalp, falls out. When the disease is well developed, there is great deformity and thickening of the skin, giving the face a characteristic appearance. Exacerbations occur, and each time new lesions appear.

The anesthetic form depends on a peripheral neuritis, due to the presence of the bacilli in the nerve fibers, and is sometimes confined to the hands and feet. It is the least contagious, mildest and slowest in its course. The period of incubation may extend over years, and the invasion is, usually, slow, and not as marked as in the tubercular form. There is a feeling of malaise, with vertigo, headache, itching and burning sensations. Fever is absent or slight, and there are areas of hyperesthesia, or numbness, with sharp, lancinating pains. Sometimes pruritus is the only symptom noticed before the appearance of the eruption. Bullæ may form over the peripheral nerves, last only a day or two, and then as quickly disappear, or ulcerate, leaving atrophy of the skin. Red or brownish nodules, the size of a pea or larger, usually appear and increase in size. At first, as a rule, they are hyperesthetic, but when they disappear they leave an anesthetic area. The skin becomes yellowish or brownish in color, scaly, dry, with destruction of the sweat and sebaceous glands. The mucous membranes become gradually involved, and there is atrophy of the subcutaneous tissue, muscles, hair and nails, and the fingers and toes are liable to contracture and necrosis. There is an enlargement of the ulnar and other nerves. Paralysis is a late symptom. Ulceration is common, but less extensive than in the tubercular form.

The mixed is the least common form, and usually begins as the anesthetic; fever and tubercular nodules developing after a few months.

One great difficulty in determining the etiology is the fact that the disease may not show itself for years after the exposure. It is claimed, by some, that eating fish is a cause of the disease, but we find many cases of leprosy among people who never eat fish. Until lately it was considered that it could be acquired through heredity, but this can be denied, as no case of congenital leprosy has ever been observed, and children of leprous parents do not have the disease if removed to other surroundings. Although

there are some who doubt it, most authorities believe that it spreads by contagion, and climatic predisposition and manner of living have a decided influence. It is only slightly contagious, and in countries where leprosy is prevalent few who have proper food or live under proper sanitary conditions, contract the disease.

Although there have been cases of leprosy in New York City for years and no attempt made to quarantine them, not a single case has originated here, and there is no danger of contracting the disease in New York City; the same, however, can not be said of some parts of the South. Many believe it is only communicated after contact, while others believe there is an intermediary host, as in malaria and yellow fever. In tropical countries, where they go barefooted, a large number have the first lesions on the feet, which would seem as though the infection had taken place through an abrasion of the skin. Culture slides, placed near lepers while they are talking, usually show a number of bacilli. Usually the mucous membrane of the mouth and nose, as well as the secretions from the ulcers, may be the means of infection.

Attempts at inoculation failed until Arning succeeded with a criminal, but the proof is not conclusive, as several members of his family were lepers. At Pasteur's Institute, in Paris, they have lately found the bacilli in the spleen, liver and kidneys of guinea pigs, eight months after injecting the bacilli from a tubercular nodule under the skin, and also in the abdominal cavity.

Few physicians have an opportunity of studying leprosy, and an error in diagnosis is liable to give rise to much suffering. The diagnosis, as a rule, should give no difficulty when the disease is developed, but in the atypical forms, and when it develops insidiously, no disease is more difficult of recognition. The prodromal symptoms possess little diagnostic value, and may be mistaken for malaria, but examination of the blood would exclude that. Syphilis is, perhaps, most often confounded with the disease. In syphilis lesions are smaller, more regular in size, and appearing in locations where they are rarely seen in leprosy, and run a more rapid course. In leprosy, we have the characteristic appearance of the face, and deformity of the hands and feet, besides the areas of anesthesia. In lupus vulgaris there are no prodromal symptoms, the disease is limited to a small region, usually the face, and spreads slowly. There is no infiltration, the lesions being softer than the normal skin. In erythema multiforme, there is an absence of areas of hyperesthesia or anesthesia, and febrile symptoms are absent or slight. The lesions, as a rule, are smaller, and leaving the skin in color with, perhaps, a slight pigmentation.

Morphea has no constitutional symptoms, and a patch is normal in sensibility. Vitiligo is simply the loss of pigmentation, besides there is hyperesthesia, anesthesia, or constitutional symptoms in leprosy.

The early stage of the anesthetic form might be mistaken for other diseases of the nervous system, but the presence of patches of anesthesia is of great diagnostic value, together with the enlargement of the ulnar and other nerves. In doubtful cases, examination should be made for the bacilli, but often this does not give conclusive proof, and we often fail to find them in the anesthetic form.

The prognosis is very unfavorable, although the patient may live for years. The disease is worse in the tubercular form. We sometimes see mild, abortive cases, and, in a few instances of the anesthetic type, the disease has died out, leaving only evidence of its changes in the nerves. The process may be very gradual but suddenly an exacerbation occurs and the disease progresses rapidly.

Treatment.—Treatment, as a rule, has not been very satisfactory, but, under improved hygiene, we are able to retard the progress of the disease, and we meet with good results in a few cases. The patient should be sent to a non-leprous country, and the secretions disinfected. The greatest attention should be paid to the general health, especially as to food, regular exercise, bathing, etc. A great many drugs have been tried, but few have stood the test, probably chaulmoogra oil, gurjun oil, used externally and internally, have given the best results. Chaulmoogra oil is nauseating and may be given in milk, but better, perhaps, in

capsules or an emulsion, commencing with three minims three times a day and gradually increasing to twenty. In some cases gynocardate of magnesia or sodium agrees better with the stomach, commencing with one-half grain three times daily, and increasing to three grains. Gurjun oil should be given in an emulsion of powdered acacia and water, five minims three times daily, and gradually increasing the dose. Locally, friction with oil or an ointment will produce temporary improvement, and one of the oils should be well rubbed in about two hours a day. Unna advocates ammonium sulpho ichthyolate internally, and, locally, this prescription: Salicylic acid, ten grains; ammonium sulpho ichthyolate and chrysarobin, each twenty-five grains; vaseline, one ounce. Strychnine has been highly recommended, and has given good results, especially in the anesthetic form. A number of cases have been reported benefited by injecting hypodermically, once a week, one-quarter grain of bichloride of mercury, dissolved in twenty minims of water. Tuberculine has been used, but is dangerous, as it sets the bacilli free, instead of destroying them. A serum obtained from the horse has been tried with poor success. The ulcers should be treated by general antiseptic principles.

148 West Eighty-Fifth Street.

[Written for the MEDICAL BRIEF.]

Some Suggestions on Amendment of the Law Regulating State Boards of Health.

BY W. F. MORROW, M. D.,

Professor of Principles and Practice of Surgery in the University Medical College.
Kansas City, Mo.

Having been a member of the State Board of Health for over four years just past, and having had a good opportunity to observe the workings of said Board, I feel that it would not be amiss at this time to make some suggestion with regard to amendments to the law now in force, regulating the practice of medicine in this State.

My first suggestion is, that the State Board of Health be entirely freed from politics.

Watching the operations of other States along this line, and noting the success which attends their work, I would suggest that in the selection of this Board by the Governor, that he require the medical schools of this State, regular, homeopathic and eclectic, to furnish a list of names of men suitable for such positions on the Board of Health, in order that medical men of special fitness and qualifications be selected for the respective positions on the Board.

The State Board of Health, as a licensing body, is of vast importance to the people of the State and its usefulness is now beginning to be appreciated by the commonwealth.

It is a very important thing that a Board be selected which is especially fitted and prepared to judge of the qualifications of physicians to practice medicine in the State of Missouri. No one outside of the medical profession can fully appreciate the great amount of injury and embarrassment which attend the careless work of an incompetent Board of Health.

I refer to Board of Health because in this State the Board of Health performs a double function, that of licensing physicians to practice medicine, and that of caring for and protecting the people from the invasion of contagious and infectious diseases.

This double function which is in no way kindred, should, in my judgment, be separated, and I would suggest along this line that there be established in the State of Missouri a State Board of Health whose duty it would be to care for the people of the State relative to public sanitation, etc., while the duties of the Examining Board would be strictly confined to the examining and licensing of physicians to practice medicine in this State. This is quite sufficient for any Board if the work is done as it should be.

With regard to the personnel of the Board of Health, I wish to state that during the last legislative assembly, that body prepared two bills which were introduced in the House, creating two separate Boards, of five members each, to be called the State Board of Health and the State Examining and Licensing Board, respectively. In the committee-room these bills were discussed seriatim.

One physician, prominent in the State, was present, and when the question came up as to the men who should be placed upon this Board, he publicly declared that no physician should be placed upon this Board who was a teacher in any medical college in this State. My reply to him was that if he would reverse it it would be nearer correct. However, the committee accepted his suggestion and this section of the bill was so amended.

I take the position that a physician, unless a teacher of medicine, unless experienced in conducting examinations, unless thoroughly familiar with the principles of medicine and surgery, is hardly competent to conduct an examination along proper lines. Of course, I do not suggest, nor did I then, that the Board should be entirely composed of teachers in medical colleges, but I do, and did then, take position that the Board should be largely represented by this class of physicians.

Another suggestion which, I think, is of vital importance, unfamiliar to the ordinary doctor and layman, viz.: that the Secretary of the Board of Health should not be a member of the Board, for the reason that it is unusual to have on the Board a doctor who will make a good secretary. The duty of a secretary is to attend to the executive work of the Board. I would suggest, therefore, that the secretary be selected with a great deal of care and caution. Let him be a man who has had considerable clerical experience, one who is thoroughly adapted to this sort of work, and who can devote his entire time to it. It has been the rule and custom in this State since 1884 for the secretary to be selected from the Board, "according to the law," and the documents and records and paraphernalia of the secretary's office are hauled and carried around over the State and located in the various doctors' offices who are elected to fill this position.

Now, to do good and effective work, this office should be located at Jefferson City, the State capital, where these records can be carefully filed, and where there will be a permanent home for the secretary and the records. I know that when I received these secretarial records a little over four years ago, I received few records that were of any importance or of any assistance to me as secretary elected by the Board. The result was that it took at least a year for me to familiarize myself with the needs and requirements of the office, and to make records that would be of service. No physician could possibly be selected who could undertake to do this work satisfactorily under less than one year's study. There are many questions, legal and otherwise, which arise for his decision; there are many blank records that he must properly fill out and prepare. For this reason a secretary should be selected from without the Board. This would enable him to continue with the Board, and with successive Boards, in spite of political changes, and bring the work up to a high standard, with much benefit to the people of the State.

The changing of the personnel of the Board of Health with each incoming administration has a tendency to prevent that necessary development and advancement which is important to the people of this State. For that reason I make this suggestion, based upon four and one-half years' observation as secretary of this Board.

Altman Building.

[Written for the MEDICAL BRIEF.]

Diagnosis of Appendicitis with Differential Diagnosis.

BY WM. R. WELCH, M. D.,

Professor of Gynecology and Obstetrics in the Denver Homeopathic Medical College.
Denver, Colo.

The most constant and characteristic symptoms of appendicitis are sudden pain in the epigastrium, vomiting, elevation of temperature, rapid pulse, moderate bloating and pronounced muscular tension over the right side of the abdomen.

Under the consideration of the former symptoms being conclusive, we must remember there is found an occasional individual variation. The epigastric is reflex only; the real seat of the lesion can be ascertained only upon manual examination of the abdomen.

In the usual case the point of greatest sensitiveness can be located slightly be-

low a line drawn from the navel to the anterior superior iliac spine, and somewhat nearer the iliac spine than the navel; but, remembering that we have individual variations, we sometimes find the greatest sensitiveness, or seat of pain, decidedly below the point above mentioned, and near a line of the pelvic brim. This leads to confusion, especially in the case of women where there is a suspicion of uterine trouble.

In appendicitis pain arising from pressure due to sensitiveness is more marked by pressure over the abdomen than through the pelvis, while in ovarian and tubal trouble the pain is greater from pelvic pressure. Vomiting is nearly always present in some stage of appendicitis, usually in the earlier stage, and is beneficial in the early stage. Persistent vomiting in the later stages is a dangerous symptom, denoting intestinal obstruction.

Temperature and pulse are in general misleading, but in the beginning both rise nearly or to the hundred mark, and may go much higher; later, and in the face of most fatal conditions, the pulse often falls below eighty, which misleads some in making diagnosis. Temperature in fatal conditions often falls low, or is aimless, with a flickering course.

In serious conditions the facial marks of distress are pronounced.

Constipation is usually present, but not a guiding symptom. In the beginning of the attack there are often a few liquid passages.

Pain and vomiting may be said to be the most prominent diagnostic symptoms, and because of this, the conditions most commonly mistaken for appendicitis are gallstones, renal colic, renal calculi, typhlitis, typhoid fever, biliary calculus, etc., etc.

In gallstones the most prominent symptoms are contraction and enlargement of the gall bladder, colic, rise of temperature, clay-colored stools, possibly presence of tumor in region of gall bladder; tenderness over tumor, and nearly whole body; nausea, vomiting, jaundice, indigestion. Excruciating pain in the right hypochondriac and epigastrium, radiating down to the navel, back to the spine, upward to the chest, and even to the shoulder blade. The slightest touch increases the pain.

In renal colic the passage of renal calculus is attended with the most excruciating pain, the pain passing along the ureter, with usually retraction of the testicle on the corresponding side.

In renal calculi pain is usually sharp; it may be constant or spasmodic, and is usually referred to the location of the impaction; the pain often radiates down the thighs and legs.

In typhlitis there is extreme swelling in the right ileo-caecal region. The swelling itself is movable, and its growth is rapid. Pain commences suddenly, is short, lancinating in character, is increased on motion. There is obstinate constipation, which may be followed by intermittent diarrhea. Vomiting is usually violent, and greatest at the height of the disease. Difficulty in urination, numbness of the right leg, sometimes drawing up of the testicle. Fever is more or less violent.

In typhoid fever the attack comes on slowly for several days, usually ushered in with more or less violent chill, followed by fever. The form of the temperature is diagnostic of typhoid fever. Great weakness and prostration, severe headache, dizziness, ringing in ears, sleeplessness, more or less delirium, great thirst, appetite poor, bowels constipated in earlier stages of fever, followed by diarrhea. Often bleeding from the nose.

I would advise you not to lose sight of the fact that a diagnosis of appendicitis is much more difficult in some cases; it is more difficult to accurately diagnose the disease in the female than in the male, for instance. In the former the symptoms may resemble those of appendicitis, but be really due to an inflammatory condition of the uterine appendages, or a co-existing inflammation; the appendix may be imbedded in the inflammatory exudate, and thereby distorted so as to cause error in diagnosis, if the proper landmarks are not considered.

One symptom of great diagnostic value in appendicitis, or a differentiating point, is the degree of muscular tension found in the region of the right rectus muscle.

being absent or of slight degree in pelvic disease.

The migratory habit of the tip of the appendix should be remembered, and thus not mislead in diagnosis. The base of the appendix, however, occupies a well fixed position, and if the characteristic inflammatory pain is located above a line drawn from one anterior iliac spine to the other, it is almost certain to be a case of appendicitis.

Temple Court.

[Written for the MEDICAL BRIEF.]

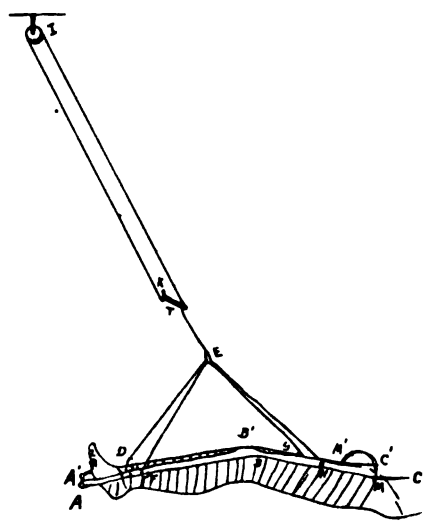
A Plea For a More Extended Use of Hodgen's Suspension Splint.

BY HORACE G. HARVEY, A. B., M. D.,

Professor of Principles of Surgery in the Denver and Gross Medical College.
Denver, Colo.

Hodgen's suspension splint for treatment of fractures of the femur not being in such general use as its merits warrant, and knowing that the majority of physicians are not familiar with its method of application and the advantages claimed for it, I deem that it is not out of place to call attention to its advantages and give in detail a description of its construction and application. Various works on fractures mention the splint, and some give cuts of it, but do not give in detail the method of application.

The splint is made of a single piece of No. 2 wire, bent as shown in diagram. A A^1 is four inches and rests below the sole of the foot. The angle at B B^1 is just enough to give sufficient flexion of the knee for comfort. A^1B^1 and A B are each twenty-two inches. B^1 C^1 and BC each twenty inches, with a slight upward curve near C^1 so that the wire clears the pubes. MM^1 is a bow of No. 2 wire that may be slid up and down the sides of the splint, its purpose being to keep the distance between C and C^1 such as will permit the upper part of the thigh to rest between them, while the bow itself will clear the thigh anteriorly. D, F, G, H, are hooks fitting the splint fairly snugly but movable. D E G and F E H are cords of pliable small rope of equal length attached by their ends to the hooks just mentioned. The pulley I is fastened to the ceiling at such a point, if the ceiling is from nine to twelve feet high, that a perpendicular from the pulley will fall seven to ten inches distally to the sole of the foot. In children this distance should be somewhat greater. If it is not possible to attach the pulley to the ceiling it can be attached to a frame passing up over the foot of the bedstead. E K is a cord looped at the end E around the cords D E G and F E H. The other end of this cord is passed through a hole in the wooden block T, then over the pulley, and finally through the block T again, as indicated in the diagram. T is a block of wood about two inches wide, one-half inch thick and six inches long, with holes in each end to allow the passage of the

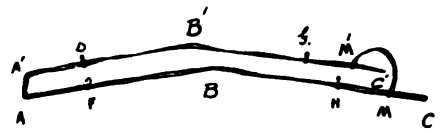


cord, which should go in the direction indicated to give friction for retaining in position. When T is slid down the cord it lifts the splint and the lower extremity clear of the bed.

To apply the splint, place the thigh in an approximately normal position. Apply rubber adhesive plaster, as in Buck's extension. Place the splint about the lower extremity, both the splint and the extremity lying on the bed. The cord passing through the spreader of Buck's extension is then tied to AA^1 short enough so that BB^1 will be at the bend of the knee. Pin an end of a three or four-inch-wide strip of muslin around the side of the splint at the lower end; pass the strip under the heel and pin the other end

to the other side of the splint, so that the heel will rest in a swing. Pin another strip at the bend of the knee and one near the upper end of the splint. Next, slide the block T down the cord and thus raise the thigh from contact with the bed. Strips of muslin are now pinned along the entire length of the limb, from the heel to the gluteal fold, so that it rests in a sort of hammock. Since the upper fragment in fractures high up on the femur assumes a position of flexion and abduction, the lower fragment is brought into line with it by virtue of the elevation in suspension, and the splint should be in a position of abduction to an extent indicated by the upper fragment. The same position is applicable to all fractures of the femur.

The extending force is the weight of the limb exerted through the rubber adhesive attached to the leg and to the splint. The amount of extension is increased by the obliquity of the suspending cord and can be made greater by placing weights on the splint.



In ordinary cases an anesthetic is not necessary. The reducing force furnished by extension continues to act, and a fracture that may not be completely reduced at the time of application of the splint will be in a few hours.

On account of the lack of friction between the limb and the bed the extending force needed is not so great as in other splints. If there is a tendency for the body to slip down, the foot of the bed should be slightly elevated.

A short upper fragment can not be easily controlled by any splint. The lower fragment can be put in line with the upper by the suspension splint. In splints where the limb rests upon the bed, if the trunk is moved the upper fragment moves independently of the lower, thereby favoring non-union and deformity, whereas, in the suspension splint both fragments move together.

With the suspension splint the patient can raise the buttocks to allow the use of the bed-pan, and to facilitate the change of bedding and make the prevention or treatment of bedsores easier; the shoulders may be elevated without disturbing the seat of fracture. The less confined the patient is the better and more comfortable. Because of the greater freedom of movement, the splint is well adapted to the aged.

It is peculiarly serviceable in compound fractures, because the strips of muslin may be removed at any place and leave a free field for dressing. The limb is always ready for inspection; no pressure is produced anywhere; as the muscles atrophy the strips of muslin are easily readjusted.

It is applicable to any fracture of the femur from the neck of the femur down.

The splint can be made by a blacksmith in half an hour. It is easily, quickly and comfortably applied.

The results in my experience are better than with other splints.

1545 East Thirty-First Avenue.

[Written for the MEDICAL BRIEF.]

Penetrating Injuries of the Eye.

BY HUGH MILLER, M. D.,

Professor of Ophthalmology and Otology in the Western Dental College and Kansas City Veterinary College, Kansas City, Mo.

Sources of external injuries to the eye are legion. For diagnosis and treatment, and especially for prognosis, injuries are classified by various writers and teachers, but such classification or grouping must, necessarily, be an arbitrary one, since, as stated above, the sources of injury are of so great variety. For the student a regional classification may be a useful one, such as injuries to the cornea, eyelid, etc., but for the busy practitioner such a manner of grouping is soon laid aside.

A few facts in the common causes of injury should be sought for, and the information thus gained be made the foundation for diagnosis, prognosis and treatment. Some information may be had from an intelligent patient or companion by word of mouth, but the greater part will, necessarily, require the skill of the attendant, and to be secured

by personal inspection. It is sometimes possible for the patient to state the nature of the injuring body, if it be sharp, a pointed instrument, or a dull one; a clean one, or a foul one; the direction from which it came, and the position of the eye at the time, and many other similar facts which are of great value in gaining a thorough knowledge of the case at hand; but it will be required of the attending physician to verify these statements during the process of inspection. Not that it is necessary to question the veracity of the patient, but one finds too few people who are able to furnish valuable information in such matters, though willing and glad to do so.

A wound made by the point of a knife blade is not, necessarily, a puncture, and it may be a puncture even though those seeking assistance refuse to believe such is the case. For example: A six-year-old boy was brought to my office with this history: The child was seated on the floor, playing with a knife. He suddenly cried out that he had struck his eye. His cries lasted but a moment. His eye appeared perfectly normal. Bedtime having arrived, he was put to bed. Pain did not appear until thirty-six hours after the injury. After carefully examining this eye, I stated to the mother that the point of the knife had penetrated deeply into the eyeball, and had injured the deeper structures and would seriously impair vision permanently, if not wholly destroy it; particularly if it had become infected at the time of the injury, and, from a careful inspection of the wound, I believed that a serious inflammation had started. It was difficult for her to believe that such an injury had occurred, and for this reason I was unable to control the patient as I desired. The facts were present to justify a doubtful prognosis. Though the wound in the cornea showed, at this time, a mere line, the iris was snipped in one point, and plastic material had caused adhesions to the crystalline lens. Of the injury, posteriorly, I was unable to speak, and how deep the point of the knife had passed it was not possible to know. The wound was an infected one, as shown by the progress of the disease, panophthalmitis setting up rapidly. The destruction of vision and the shrinking of the globe followed.

A second case of penetrating wound, which proved fatal to the eye, was that of a young man from Coalesburg, Mo., while hunting with a brother. He was standing near a hedge when a small shot from the gun of his brother, striking hard wood, glanced and passed through the right eye at the upper inner quadrant. It cut a smooth, round hole in the iris. Direction was backward, downward and inward. The shot passed through the orbit, entering the nasal cavity, and was expectorated by the patient. In this case, vision was destroyed, but several years afterward there was but slight change in the appearance of the eyeball. This case, too, I saw but a few times, as both parents and patient could not understand the dangers of the situation.

A third case of penetrating wound I report with quite a different result, which, I believe, was due to the method of treatment. Mr. H., a laborer, while standing some ten feet or more from men cutting heavy iron with hammers and chisels, was struck in the eye with a piece of steel, one inch long and one-quarter inch thick. When he arrived at my office his face and shirt front were covered with blood. The hemorrhage was a copious one. The eyelid was not injured in the least. Pain was not severe at this time. The patient was suffering more from shock and fear of loss of the eye than from actual pain. Upon examination, I found a long, ragged puncture at the inner sclero-corneal junction, sufficient to admit a No. 16 Theobald's lachrymal probe. The only means of ascertaining whether particles of steel yet remained was by the use of magnetic probes. Examination of the vitreous chamber thoroughly with probes, under aseptic conditions, revealed no particles of the missile.

Treatment consisted in bringing the injured parts as near as possible to the normal position. Instillation of one per cent solution of atropin sulphate into the eye every six hours, night and day. The eye was dressed with sterile gauze, giving gentle pressure, and the eyelids kept as quiet as possible. This dressing was not removed until the third day. The patient was kept prone for the first three days,

and in a darkened room, and fed on a liquid diet. The use of atropin was continued, after the first week, three times a day. Healing progressed very favorably from the first. Vision slowly returned. Some months later, I adjusted a glass to the eye. Minus 30/20, while the fellow eye was emmetropic. Had it not been that later this eye became almost emmetropic, we might have thought the eye was originally myopic. At the end of a year the eye was again emmetropic.

How few cases does the oculist, or even the general practitioner, see so promptly or control so perfectly, as this one. Prompt action and close attention are the essentials in all puncture wounds. Be careful not to do too much. Be sure to remove all foreign matter. Put not only the eye at rest, but also the patient. Absolute rest, then follow the procedure of non-interference, unless called to do so by untoward symptoms. Dress and leave alone, save to instill atropin in now and then, as required. If the wound is a central one, atropin should, undoubtedly, be used. Sometimes eserin can be used to a good purpose in punctured wounds near the margin of the cornea, provided the injury does not reach the iris. When near the iris, atropin is the sheet anchor remedy. Cold packs are useful in pain in the early stages, during the first twenty-four hours. Later, they are to be avoided, since either heat or cold produces changed condition of the blood pressure, and sloughing may ensue. Punctured wounds require such perfect, constant attention, that the patient should be placed in a hospital, or attended by a nurse.

Prognosis in all punctured wounds should be given guardedly. A better prognosis can be given if early, skillful attention is given, and strict nursing, and the patient attends strictly to instructions.

In penetrating wounds, with prolapses of the iris, the prolapse may be clipped off, under strict aseptic conditions. Not antiseptic, but aseptic, as the internal structures can not stand antiseptics, even of the mildest kind. It is safer to use pure sterile water only.

To recapitulate, briefly:

1. Learn the nature of the injury and injuring instrument.

2. Ascertain the structures involved in the injury.

3. Endeavor to free the eye of all foreign particles.

4. Restore the parts to their normal positions, as nearly as possible, and at as early a day as possible.

5. Put the eye to rest, absolute rest, and extend this period of rest into days.

6. Follow a plan of non-interference, after the first treatment and dressing, unless indications.

7. Use atropin or eserin, as the case may indicate, instilling it with as little interference with the dressing as possible.

8. Patients with penetrating wounds should give themselves up absolutely to the directions of the physician in charge, and such wounds should have the most careful attention and most perfect technique, and placed under absolute rest. Then, if unfavorable changes appear, it is due to the fact that the injuring instrument was an infection-bearing one, and such a prognosis is unfavorable.

Shukert Building.

[Written for the MEDICAL BRIEF.]

Diagnosis and Treatment of Intestinal Obstruction.

BY GEO. S. COON, M. D.,

Professor of Surgery and Gynecology in the Southwestern Homeopathic Medical College and Hospital.
Louisville, Ky.

The subject of intestinal obstruction is of equal importance to the surgeon and physician, especially to the latter, as upon his early diagnosis largely depends the outcome of the case.

Obstruction may be either partial or complete, mechanical or dynamic; in the former the treatment is purely surgical, and in the latter purely medical. Clinically, and for very practical reasons, intestinal obstruction is classified as acute and chronic.

Acute obstruction is most frequently above the ileo-cecal valve, while chronic is below it. It should be remembered, however, that chronic obstruction may, at any time, become acute.

Diagnosis of acute obstruction depends upon four cardinal symptoms. Intermit-

tent colicky pain, vomiting, tympanites, and absolute obstipation. Pains are intermittent in character, and are due to the peristaltic action of the intestines. Vomiting is a symptom that is always found, sooner or later, and is more persistent and severer the closer the obstruction is to the stomach, while tympanites is the more marked the further the obstruction is from the stomach. Early in the attack fever is absent, and only appears after gangrene or peritonitis become manifest. Pulse, at first, is slow and full, and becomes weak, thready and rapid only when peritonitis is present. There is no tenderness at the beginning of the attack; in fact, pressure, as a rule, is grateful. There is also entire absence of rigidity of the abdominal muscles, which always assists in differentiation.

The chief causes of intestinal obstruction are volvulus, intussusception, internal hernia, foreign bodies, strictures, bands and adhesions, diverticuli, fecal impaction and, occasionally, tumors. Volvulus is very frequently found at the sigmoid flexure, and is due to elongated mesenteric, with loaded bowel. This is a rapidly fatal form of obstruction, owing to the interference of the blood supply causing rapid gangrene. It is to be diagnosed, in addition to the cardinal symptoms, by the finding of a tumor in the pelvic region, with localized tympanites over the tumor. Intussusception is the most frequent of all the causes, and constitutes about eighty per cent of all cases found in children under six years of age. Its chief symptoms, in addition to those already mentioned, are a bloody mucous discharge, and the finding of a sausage-shaped tumor. The usual location is the ileo-cecal valve. Strictures are more frequently found in advanced age and, usually, at the ileo-cecal valve. In the aged they are usually due to malignant troubles, and in younger individuals to tuberculosis and syphilis. Fecal impaction is most frequently met with in the large intestine, and can be diagnosed by finding tumor, which can be dented on firm pressure, particularly if the patient is under an anesthetic. Internal hernias can usually be diagnosed only after an incision has been made. Foreign bodies are diagnosed from a history of the case, possibly of gall-stones, or the swallowing of some substance by the patient. Bands and adhesions are to be expected following cases of peritonitis or severe operations. Meckel's diverticulum causes a small per cent of cases of intestinal obstruction, and we have no means of determining this before an incision has been made.

Intestinal obstruction must be differentiated from peritonitis, acute indigestion, gall-stones, appendicitis, and various other abdominal troubles. Chronic obstruction is most frequently met with in people of advanced age, middle life. A valuable diagnostic sign is the presence of peristaltic action, which can be perceived through the abdomen in nearly all cases. These patients are, usually, thin, and this permits of an inspection, which is not possible in the case of a fleshy patient; but where present, in either the acute or chronic form, it is nearly pathognomonic, and is never seen in cases of peritonitis.

It is much easier to make a diagnosis of intestinal obstruction than to determine the cause, and, while we should attempt in all cases to determine the location and cause of obstruction, valuable time should not be sacrificed in this, too frequently, vain attempt. A diagnosis of intestinal obstruction having been made, it then becomes more important to relieve the condition than to determine its pathology.

It is agreed, by all surgeons and physicians, that, no matter what the cause of obstruction, food of all kinds, and even liquid, should be withheld from the stomach, as soon as diagnosis is made, since food only irritates an already congested mucous lining, but ferments and increases the gas and distention. Patients should be fed per rectum. Lavage of the stomach has also been found to be of very great benefit, giving marked relief to these patients, as it removes the gas and fermenting material, which is always found in the stomach; in fact, many of these cases obtain such relief from this treatment as to lead to delay in more radical measures. This should never be done. Enemas are resorted to, not only by the physician, but by the laity, and I need only mention them in passing. Cathartics, while nearly always resorted to, are only

to be mentioned to be condemned; they should never be given in cases of mechanical obstruction, because they lash the already overworked bowel into greater contractions, increasing also the distention of the bowel and hastening the fatal process. They are only valuable in cases of dynamic obstruction, which are so frequently found after abdominal operations.

The death rate from operative procedures, in intestinal obstruction, will continue to be high until the profession learn to stop dallying with medicines, and seek early operative interference. Diagnosis of mechanical obstruction having been obtained, no time should be lost in subjecting the patient to operation.

Gaulbert Building.

[Written for the MEDICAL BRIEF.]

Why Cigarette Smoking Is Injurious.

BY B. W. LINDBERG, C. E., M. D.,

Professor of Chemistry, Toxicology and Urinalysis in the Kansas City Hahnemann Medical College. Kansas City, Mo.

Cigarette smoking has long been known to be injurious to the health, but the reason why cigarettes should be so injurious while cigars and pipes can be indulged in with little or no harm, has been a subject of much thought. The reason lies in the difference of partaking. Cigar and pipe smoke is, as a rule, too strong to be inhaled, while the milder cigarette smoke is generally inhaled, and, as we will see later, the chemical action of the cigarette smoke in the lungs, on the blood, etc., will give us the clue to the havoc wrought.

Tobacco is largely cellulose; of course, as we all know, it contains nicotine, from two to eight per cent. The smoke contains all the products of burning and dry distillation of cellulose (wood), of which we will mention a few: tar, ammonia, carbon dioxide, carbon monoxide, and to these may be added the nicotine and the products of its dry distillation. These are the same, whether the smoke indulged in is by way of the cigar, pipe or cigarette. There is a possibility, however, that the smoke of the cigarette will be richer in carbon mon-oxide because the burning end of the cigarette is longer, and, consequently, the carbon dioxide made in the outer end of the burning cigarette will be reduced to mon-oxide going through the heated carbon before it enters the mouth.

The paper of which the cigarette is made has been accused by many to be the cause of the injurious symptoms that follow cigarette smoking, and it has often been intimated that the manufacturers of cigarette paper put opium in it in order to establish the habit and thereby advance sales. This latter I do not think probable, because opium is a very expensive drug and the paper is very cheap, in fact given away often, and I think we will find the reason of the havoc wrought in another substance.

The products of the decomposition of the paper are about the same as that of tobacco, because the paper is almost pure cellulose. Cigar and pipe smoke is taken into the mouth and from there expelled. The membrane of the mouth and pharynx does not absorb as readily, but still enough of the nicotine is taken up through these membrances to give direct action. Notice the boy who smokes for the first time and see how the nicotine takes effect. Of course, a toleration is soon established, and after awhile greater indulgence is possible. In cigarette smoking, however, there is another factor of great importance; the cigarette smoker inhales the smoke, which means that he takes it deep down into the lungs with the air he breathes and exhales it again. Here we have to do with another kind of tissue—the lung tissue, which membrane is especially made for the osmosis of gases; through this membrane the oxygen of the air is exchanged readily for the carbon dioxide of the blood. This is the ordinary way in which oxyhemoglobin is made in the blood. Oxyhemoglobin, as we know, is rather an unstable compound, readily giving up its oxygen to the various tissues in the body, forming hemoglobin, which comes back to the lungs again for a new supply of oxygen to form oxyhemoglobin.

As mentioned above, we have another gas in fairly large quantities in cigarette smoke. I have reference to carbon monoxide. This forms also a combination with hemoglobin; thus combined, carbon-monoxide-hemoglobin is a very stable compound, and as a consequence the hemo-

globin is lost to the blood. For every molecule of carbon monoxide taken into the blood through the lung, a molecule of hemoglobin is lost. This hemoglobin, as you know, is the most important element in the blood, and in all probability one of the most difficult to generate. This would explain the bloodlessness that we notice in the cigarette fiend, as well as the effect on the brain; the blood being impoverished in the above manner and the brain starved from the impoverished blood.

There are many who smoke cigarettes without inhaling the smoke, and in those we do not observe the awful effects that are noticeable in the "fiend." We must also remember that we have nicotine in the cigarette smoke as well as in the smoke of the cigar and pipe, and this nicotine being inhaled into the lung is taken up much more readily by the membrane, which is especially made for the purpose of gas absorption. Here we see that a small quantity of tobacco in the cigarette will give the largest quantity of poisonous action.

The condition of the brain cells brought about by the diminished tissue change from the lessened oxygen-carrying capacity of the blood, may be responsible for the inability to differentiate between right and wrong, that we find so frequently in cigarette fiends.

New Ridge Building.

[Written for the MEDICAL BRIEF.]

Operation for Desperate Cases.

BY FREDERICK A. DUNSMOOR, M. D.,

Professor of Operative and Clinical Surgery in the Medical Department of the University of Minnesota; Gynecologist to City Hospital; Surgeon to Asbury Hospital, St. Mary's Hospital, Swedish Hospital, N. P. Ry., C. St. P. and O. Ry. and "Soo Line," Etc., Etc. Minneapolis, Minn.

At the close of my clinic last Saturday my attention was called to a patient evidently *in extremis*. There was a history of appendicitis, with apparent recovery the week previous. Patient had gotten up and walked about the house on Sunday. The next Thursday she was again taken ill. On Friday a physician was called, who sent her to the hospital on Friday night. Pulse, one hundred and forty; temperature, 102° F.; collapse; mind perfectly clear, but an evident general peritonitis. Pulse one hundred and fifty to one hundred and sixty, and evidence of tremendous septic infection.

This is exactly the case that no one would touch who was operating for a record, but there is a question if every surgeon who has a reputation established should not, at least, do as he would be done by. It seems to me there is a possibility that some of these cases may be saved. And, in accordance with this belief, a few whiffs of ether were given, an incision made, and over two quarts of pus drained from the general peritoneal cavity, and a constant stream of normal salt solution left irrigating through the wound. Patient put to bed with hot bottles; general cardiac stimulation. Died in the evening of the same day.

Now, I am as firm an advocate for early operations as any one; and for the sake of surgery, declining to operate where there is no possibility of curing or benefiting a patient, but in cases like this it is absolutely certain that the patient must die and very soon. If such a peritonitis was one beginning because of the perforation from a gunshot wound, or from typhoid, or gastric ulcer, no one would hesitate, having in view always the certainty of a fatal termination without an operation. Therefore, it seems to me, from a humanitarian standpoint, the surgeon should always open and drain the abdominal cavity where there is a flicker of a chance that the poison may be washed away, on the same grounds that he would operate upon a moribund case of ectopic gestation, with ruptured sac, in order to control the hemorrhage.

There is, of course, the danger that operative surgery is always harmed by any incision that is followed by a fatal termination, but certainly this is the age when the public is more willing to resort to surgery than at any previous time, and I, therefore, make the plea that the patient in desperate straits may be given the benefit of a logical attempt to save life, even though one be added to the mortality record of an ambitious operator. And while I do not believe in hastening a certain death, I do believe in throwing the rope to a drowning person.

Andrus Building.

[Written for the MEDICAL BRIEF.]

Report of Operation for Enormous Tumor in Child of One Year.

BY WALDO BRIGGS, M. D.,

Dean and Professor of Surgery in the Hospital College of Surgeons.
St. Louis, Mo.

AND L. L. C. LEMOINE, M. D.,

Assistant Surgeon, St. Louis, Mo.

Tumors of the neck are matters of grave concern to the surgeon when malignancy is suspected, or rapid growth occurs, accompanied by an alarming degree of inflammation. This case presents all the clinical features of both conditions. The tumor has recently grown to its present enormous size, and the inflammatory process fully developed.

The patient is one year and eleven months old; the condition is congenital, and was noticed at parturition. Family history good. The tumor, an irregular mass, adherent, and extending anteriorly from the occiput to the point of the jaw, being about two inches in depth at the mastoid process, and attained its greatest dimension at a point over the anterior rim of the sterno-cleido-mastoideus—eight and one-half inches laterally and six and one-half inches in depth. Anterior to this point, a third cyst appeared, marked by a change in color and more nearly approximating the normal skin tint. A complete network of dilated arteries and veins enveloped the surface of the tumor. A pronounced distention of the skin surrounded the containing wall of the tumor, and added to the weight of the mass, causing the ear to be pushed upward, and so that the entrance of the auditory canal was almost occluded.

The initial incision was commenced at a point just under the symphysis, and carried posteriorly to the sterno-mastoid, under the deep cervical fascia, the growth being firmly attached to all the tissues of the right side of the neck, and involved the trachea, common carotid, jugular, pneumogastric, the sterno-cleido-mastoid and the platysma in its folds. The growth filled every chink and crevice in the side of the neck, and careful dissection was necessary to effect its removal. Chloroform was the anesthetic used.

When the tumor was first noticed at the child's birth, only two growths were in evidence, about the size of a pigeon egg, and not believed to have any connection, owing to their wide separation in position. At the age of six months the third and largest tumor made its appearance. With its advent, greatly increased activity became noticeable, and soon caused great discomfort to the patient, manifested by the difficulty in swallowing, and interfering greatly with nourishment and sleep.

The little patient soon showed the detrimental effects of impaired nutrition, and assumed the pasty color of general anemia. Some ten days since, the rapid

growth of the tumor, and the great accumulation of its contents, and the irritation produced by friction against the shoulder, overcame the integrity of the cyst wall, and part of the contents was forced out of the lower end of the central sac. The inflammation following the escape of the fluid made measures for the relief of the condition imperative, and the patient was brought to the Jefferson Hospital for operation.

Upon bimanual palpation, some degree of fluctuation was demonstrated, but was more resistant than entirely fluid contents would warrant, indicating (1) an unusually thick outer wall, and (2) a series of inner cysts within cysts. Aspiration demonstrated the contents of the anterior sac to consist solely of serous and sanguineous fluids, the coagulation of the latter being very slowly accomplished. Aspiration of the middle cyst was not carried deeply, as the wide variance in consistency of the contained tissues required a degree of force that made puncture of some involved vessel sheath more than probable.

The posterior lobe contained serous fluid only, and it was shelled out, taking care to remove the entire wall to prevent any renewal of secretion. The firm, hard bodies were seven in number and almost uniform in size, and cord-shaped in conformation, presenting a capsule covering resembling periosteum in color, and of the consistency of rubber, each nodule having a base of fatty-appearing tissue. Dissection was made as rapidly as was consistent with safety, the wound cleansed by irrigation with hot saline solution. Gauze drainage was introduced into the lower part of the cavity. As the procedure was attended with considerable hemorrhage and collapse was imminent, hypodermoclysis was given. On the day following operation the temperature was 106° F., but dropped to normal on the third day. The child is in good health, and a close return to normal condition and appearance has been the result of operation.

The management of these cases is open to the widest divergence of opinion. Some cysts, even when very large, disappear spontaneously, but this is a very rare occurrence. The proper operation is the incision of the tumor.

Electrolysis may cure the simpler cases, but it always substitutes a fibrous tumor for the one in existence, and as this, in turn, will have to be removed, it will leave a scar as pronounced, and the operation for its removal as dangerous, as if excision had been chosen as the original operative procedure.

Setons should not be used. Puncture and drainage are inefficient, excepting in simple cysts, such as hydroceles of the neck. In these single cysts, puncture and drainage may be tried.

The treatment by the injection of iodine is more uncertain than incision, the object of its use being to set up an inflammation extensive enough to obliterate the cysts and cause them to shrivel up and disappear; indeed, this result sometimes occurs spontaneously.. There is always danger of iodine poisoning or setting up suppuration.

Sublingual cysts may be often removed through an incision into the floor of the mouth carried down to the cyst wall, cyst being carefully dissected from its surroundings by a blunt dissector.

Cervical cysts are removed through an incision anterior to the sterno-mastoid muscle. Usually these cysts are not firmly adherent to surrounding parts, and removal is, consequently, not difficult.

Partial or total excision is preferable, but in patients at a tender age this procedure can be carried out only in limited cases. Partial incision, with careful control of hemorrhage, and stopping short of endangering the child's life by a too prolonged and extensive removal, is sometimes successful.

Jefferson and Gamble Street.

March 31, 1906.

Mr. W. J. Moore, the father of the little patient, writes under date of March 30, 1906, stating:

"Well, the baby is growing; he is fat as a pig; walks all over the house. Everybody is surprised to see him well, deeming his recovery impossible."

This is firm confirmation of the diagnosis made by Dr. Briggs, of branchial cyst, excluding sarcoma, a recurrence of the latter failing to make its appearance by however slight a manifestation, always present when sarcoma exists in connection with cyst development.

L. L. C. LEMOINE, M. D.

I herewith enclose my subscription. I give this with real grace and good will. The BRIEF is up to date and practical. For the past it has guided me safely over many a rocky shoal. God bless and prosper the good old BRIEF.—DAN'L MCDONALD, M. D., Baddeck, N. S., Can.

low a line drawn from the navel to the anterior superior iliac spine, and somewhat nearer the iliac spine than the navel; but, remembering that we have individual variations, we sometimes find the greatest sensitiveness, or seat of pain, decidedly below the point above mentioned, and near a line of the pelvic brim. This leads to confusion, especially in the case of women where there is a suspicion of uterine trouble.

In appendicitis pain arising from pressure due to sensitiveness is more marked by pressure over the abdomen than through the pelvis, while in ovarian and tubal trouble the pain is greater from pelvic pressure. Vomiting is nearly always present in some stage of appendicitis, usually in the earlier stage, and is beneficial in the early stage. Persistent vomiting in the later stages is a dangerous symptom, denoting intestinal obstruction.

Temperature and pulse are in general misleading, but in the beginning both rise nearly or to the hundred mark, and may go much higher; later, and in the face of most fatal conditions, the pulse often falls below eighty, which misleads some in making diagnosis. Temperature in fatal conditions often falls low, or is aimless, with a flickering course.

In serious conditions the facial marks of distress are pronounced.

Constipation is usually present, but not a guiding symptom. In the beginning of the attack there are often a few liquid passages.

Pain and vomiting may be said to be the most prominent diagnostic symptoms, and because of this, the conditions most commonly mistaken for appendicitis are gallstones, renal colic, renal calculi, typhlitis, typhoid fever, biliary calculus, etc., etc.

In gallstones the most prominent symptoms are contraction and enlargement of the gall bladder, colic, rise of temperature, clay-colored stools, possibly presence of tumor in region of gall bladder; tenderness over tumor, and nearly whole body; nausea, vomiting, jaundice, indigestion. Excruciating pain in the right hypochondriac and epigastrium, radiating down to the navel, back to the spine, upward to the chest, and even to the shoulder blade. The slightest touch increases the pain.

In renal colic the passage of renal calculus is attended with the most excruciating pain, the pain passing along the ureter, with usually retraction of the testicle on the corresponding side.

In renal calculi pain is usually sharp; it may be constant or spasmodic, and is usually referred to the location of the impaction; the pain often radiates down the thighs and legs.

In typhlitis there is extreme swelling in the right ileo-caecal region. The swelling itself is movable, and its growth is rapid. Pain commences suddenly, is short, lancinating in character, is increased on motion. There is obstinate constipation, which may be followed by intermittent diarrhea. Vomiting is usually violent, and greatest at the height of the disease. Difficulty in urination, numbness of the right leg, sometimes drawing up of the testicle. Fever is more or less violent.

In typhoid fever the attack comes on slowly for several days, usually ushered in with more or less violent chill, followed by fever. The form of the temperature is diagnostic of typhoid fever. Great weakness and prostration, severe headache, dizziness, ringing in ears, sleeplessness, more or less delirium, great thirst, appetite poor, bowels constipated in earlier stages of fever, followed by diarrhea. Often bleeding from the nose.

I would advise you not to lose sight of the fact that a diagnosis of appendicitis is much more difficult in some cases: it is more difficult to accurately diagnose the disease in the female than in the male, for instance. In the former the symptoms may resemble those of appendicitis, but be really due to an inflammatory condition of the uterine appendages, or a co-existing inflammation; the appendix may be imbedded in the inflammatory exudate, and thereby distorted so as to cause error in diagnosis, if the proper landmarks are not considered.

One symptom of great diagnostic value in appendicitis, or a differentiating point, is the degree of muscular tension found in the region of the right rectus muscle.

being absent or of slight degree in pelvic disease.

The migratory habit of the tip of the appendix should be remembered, and thus not mislead in diagnosis. The base of the appendix, however, occupies a well fixed position, and if the characteristic inflammatory pain is located above a line drawn from one anterior iliac spine to the other, it is almost certain to be a case of appendicitis.

Temple Court.

[Written for the MEDICAL BRIEF.]

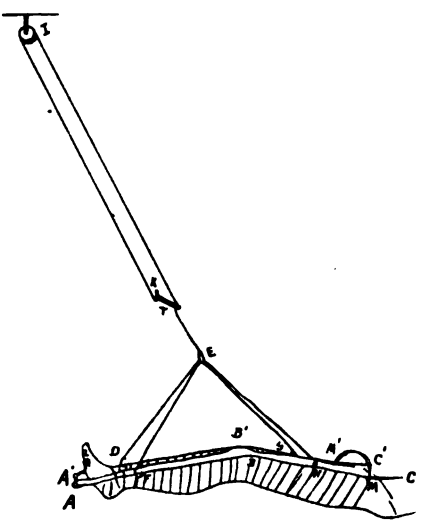
A Plea For a More Extended Use of Hodgen's Suspension Splint.

BY HORACE G. HARVEY, A. B., M. D.,

Professor of Principles of Surgery in the Denver and Gross Medical College.
Denver, Colo.

Hodgen's suspension splint for treatment of fractures of the femur not being in such general use as its merits warrant, and knowing that the majority of physicians are not familiar with its method of application and the advantages claimed for it, I deem that it is not out of place to call attention to its advantages and give in detail a description of its construction and application. Various works on fractures mention the splint, and some give cuts of it, but do not give in detail the method of application.

The splint is made of a single piece of No. 2 wire, bent as shown in diagram. A A^1 is four inches and rests below the sole of the foot. The angle at B B^1 is just enough to give sufficient flexion of the knee for comfort. A^1B^1 and A B are each twenty-two inches. B^1 C^1 and BC each twenty inches, with a slight upward curve near C^1 so that the wire clears the pubes. MM^1 is a bow of No. 2 wire that may be slid up and down the sides of the splint, its purpose being to keep the distance between C and C^1 such as will permit the upper part of the thigh to rest between them, while the bow itself will clear the thigh anteriorly. D, F, G, H, are hooks fitting the splint fairly snugly but movable. D E G and F E H are cords of pliable small rope of equal length attached by their ends to the hooks just mentioned. The pulley I is fastened to the ceiling at such a point, if the ceiling is from nine to twelve feet high, that a perpendicular from the pulley will fall seven to ten inches distally to the sole of the foot. In children this distance should be somewhat greater. If it is not possible to attach the pulley to the ceiling it can be attached to a frame passing up over the foot of the bedstead. E K is a cord looped at the end E around the cords D E G and F E H. The other end of this cord is passed through a hole in the wooden block T, then over the pulley, and finally through the block T again, as indicated in the diagram. T is a block of wood about two inches wide, one-half inch thick and six inches long, with holes in each end to allow the passage of the



cord, which should go in the direction indicated to give friction for retaining in position. When T is slid down the cord it lifts the splint and the lower extremity clear of the bed.

To apply the splint, place the thigh in an approximately normal position. Apply rubber adhesive plaster, as in Buck's extension. Place the splint about the lower extremity, both the splint and the extremity lying on the bed. The cord passing through the spreader of Buck's extension is then tied to AA^1 short enough so that BB^1 will be at the bend of the knee. Pin an end of a three or four-inch-wide strip of muslin around the side of the splint at the lower end; pass the strip under the heel and pin the other end

necrosis, more rapid in the under-nourished. The cells, which are derived from the blood, are, in general, classified under three heads. We have the small, round, white cell, the epitheloid, fatty cells, and the giant cell. The tendency of the tubercle, in the average case of consumption, is to undergo central necrosis, but where there is a tendency to recover a variable amount of connective tissue is formed.

The source of this connective tissue must, necessarily, be from the nutrition of the blood, and upon this greatly depends as to whether the tubercle shall undergo connective tissue change, and thus be cured. Cavities of the lung are formed in chronic phthisis by the weakening and dilatation of inflamed bronchi, and by the necrosis of inflamed lung tissue. The tubercle forms cavities from its own necrosis and the necrosis of surrounding inflamed tissue.

Let us now mention, more particularly, the pathology of the lung which comes from nature's efforts to surround the disease and to repair and replace the damaged lung. Tissue changes take place wherever the bacilli grow, which consists principally in cellular increase and the formation of epitheloid and giant cells, held by fibers of connective tissue, or there may be an inflammatory small cell infiltration, or an exudation of serum, fibrin, and red and white blood corpuscles, which change may occur singly or in combination. Sometimes the entire tubercle undergoes connective tissue changes, or if the patient is not so fortunate, his resisting power being good, though somewhat inferior, the formation of a connective tissue capsule offers great resistance to the caseation and breaking down of lung tissues. The resistance built up by the body around a tubercle and around a cavity are similar in construction and formation, and there is a unity of resemblance in the healing processes presented in the various forms of phthisis and tuberculosis which seems to correspond in its completeness to the amount of nutrition in the system. In the weakened under-nourished patient the advances of the disease are more rapid, and the resistance and reparative processes lessen; on the other hand, in the partially well-nourished patient, who is living out of doors and with a good appetite, the resisting powers and reparative forces take place to a greater extent and often overcome the disease.

From where do these cells and connective tissue come? Various opinions have been held, and where there are so many opinions there is uncertainty, but they can only come from one place, the blood, and if the blood is poor in nutrition, poor in cell activity, poor in fat and other constituents, then tuberculosis advances rapidly, for nature has not the means at her disposal to overcome the disease; on the other hand, if we furnish this nutrition through subcutaneous injections of oil (since the patient will rarely eat sufficient fats, and if he does they may not be absorbed until his digestion is trained), together with a proper diet, we have the material for the cure of the disease, since oil injected subcutaneously increases the growth of all the cellular constituents of the blood and furnishes material for the formation of connective tissue, and for the nutrition of the lung. We can now see how subcutaneous injections of oil meet every pathological condition of tuberculosis in a physiological manner and according to nature's immutable laws. The proof of their value is found in the fact that they cure, and thus proves all that we have said in theory.

[Written for the MEDICAL BRIEF.]

Protection for the General Practitioner's Hands.

BY H. L. WHITENER, M. D.,
St. Louis, Mo.

Constantly reading new methods for the preparation of the hands before an operation, which are similar to the one below, led me to write what follows:

Take, for example, from "Kelly's New Operative Gynecology," where he advises:

"First, the hands and forearms be vigorously scrubbed for ten minutes with a brush, using common brown kitchen soap or green soap and hot water. Particular attention must be given to scrubbing the surfaces between the fingers, and to the nails, which must not be more than one mm. in length. The most vigorous efforts in washing must be devoted to the spaces

beneath and about the nails. The water should be as warm as can be comfortably borne, and either constantly changed with fresh water running in, or poured out and changed completely four or five times. The duration of this important step must not be measured by guessing; a clock must stand directly over the wash-basins and nurses (for the first three months) should be required to spend not less than fifteen minutes in cleansing their hands. After the experience in washing thus gained, the time may be reduced to ten minutes. Although the hands and arms now appear to be clean, they are not aseptic, for cultures taken from beneath the nails and from the skin will develop colonies of micrococci, often in large number, and, in spite of any washing, however prolonged and thorough.

"Second, the hands thus mechanically cleaned and softened, are next immersed in a hot, saturated solution of permanganate of potassium until stained a deep mahogany color.

"Third, they are then immersed at once in a saturated solution of oxalic acid, which decolorizes and completely sterilizes them. The oxalic acid solution should be as warm as can be conveniently borne.

"Fourth, the oxalic acid may be removed by rinsing the hands in warm water, but it is better for this purpose to keep on hand a dish of sterilized lime water which at once precipitates the oxalate of lime."

Now, we see it is impossible to sterilize the hands, even by immersion in permanganate and then decolorized in oxalic acid, and by soaking in a strong bichloride of from one one-thousandth to one five-hundredth, then why not adopt a method by which our hands are not subjected to all this heroic treatment, and which has, by experience, even proven to yield equally as good results as any method, and has the great advantage to the general practitioner of allowing him to do his operative, office and general work, and at the same time keep his hands in a normal healthy condition. For if one follows such a method, and has any operative work, he will be fortunate if his hands do not become rough, eczematic and full of cracks, thus rendering him thoroughly unfit for operative and general work. It was my experience, having a large general practice, and at the same time attending to my surgical work in the hospital after two or three years, to get my hands in such a state from a stubborn dermatitis, that I was incapacitated from doing any surgery for several months. Since then I have adopted the following methods of preparing the hands and the patients.

First, the hands are washed in running water with castile soap and a piece of gauze used, instead of a nail brush, care being taken to keep the nails short and cleaned with a nail cleaner, and using the gauze, which removes the loose dirt and epithelium.

Second, they are then rinsed in sterilized salt solution, using four ounces of salt to the quart, where again they are washed with a fresh piece of gauze.

Third, thoroughly dry with a sterilized towel, and then put on sterilized gloves of the better grade of white undertakers' or waiters' gloves, over these put on a thin rubber glove that has been properly sterilized. This has only one disadvantage, and that is the sense of touch is not so acute, but it compels one to use the eye, which is the better and more thorough way of operating. The patient is treated in the usual manner, of shaving, thoroughly scrubbing with soap and water, again washed with soap and water, irrigated off with bichloride, one one-thousandth, rinsed with alcohol and again with bichloride, one one-thousandth, and field of operation thus covered with bichloride towel, and the surrounding parts with heavy towel, over which is spread a sterilized piece of rubber sheeting, over this a bichloride towel, and lastly, a large sheet, sufficiently large to cover the whole patient, with a fenestra or slit over the line of incision.

After three hundred and two laparotomies, mostly gynecological, and with only two deaths—one from streptococcal tubal infection, where the abscess broke, and one from a hysterectomy, where cumolized catgut was used to tie the uterine arteries, where ligature slipped, with resulting hemorrhage—with only three-stitch abscess, when the stitches had to be removed,

one on the fifth and one on the ninth and eleventh days, respectively, I feel perfectly safe in saying that these methods have yielded most gratifying results in my hands, and under these methods my hands have greatly improved and I am not annoyed, as before, after an operation.

2009 East Grand Avenue.

[Written for the MEDICAL BRIEF.]

Medical Wonders and Medical Blunders—A Story of Facts.

BY M. J. RODERMUND, M. D.,
Milwaukee, Wis.

CHAPTER XXIV.

THE BIG FOUR—BREATHING, EATING, SLEEPING AND WORKING.

It has, no doubt, been apparent to many readers of the BRIEF that I have not stopped to inquire whether the doctrines that I have espoused harmonize or conflict with orthodoxy, heterodoxy, or any doxy at all. The only thought I have tried to keep in mind was whether or not what I have explained in this series of articles has been in harmony with nature's laws. These laws never lie, at least, no one has, as yet, caught them napping. Man can not change them and no man will ever be wise enough to cheat them. All I have stated in the previous chapters I have demonstrated to be true; therefore, it must follow that the medical fraternity are absolutely wrong in respect to the cause of disease, and the right mode of preventing or treating the same, because their notions conflict with nature's laws, therefore must be injurious and useless.

It matters not if you have faith in the Holy Trinity or whether you have faith in spirits, Christian Science, or the orthodox medical frauds, all this will not annul the punishment if you violate natural law; whether sumptuous courts, chanting priests, or tearful penitents, it makes no difference to nature whether you are a Christian or a scoundrel, the natural law penalties will be precisely the same. This being true, it behooves all mankind to obey these laws, either by instinct or education, or suffer the consequences. The beauty of it all is that the Creator's laws are so benevolent in their design that all can follow them with the greatest ease, whether he be a scholar or not. The fact is, man must abide by the "big four" in harmony with the laws of his body and his environment, namely, breathing, eating, sleeping and working, to be healthy and live a long life.

It seems somewhat ludicrous to make such a statement as the above in the twentieth century, where the claims are made of such wonderful advance and medical progress. I admit great progress, but most of this progress has been in going rapidly away from the truth. In fact, the barbarians and the uncivilized nations are nearer to nature to-day than we are, barring a few of the improved hygienic conditions which we enjoy at present. As before stated, for all practical purposes, obeying the "big four," weighted by the law of balance and adapted to each individual, is all there is to it after birth in order that we may live out our allotted time inherent in our constitutions.

I am sorry to say that our present medical philosophy, education and medication is far more injurious to the health and constitutions of our race than were the practices of the dark ages. We are to-day depending upon various pie-hunting medical and political gods to preserve the public health, who seem to know as little about these "big four" laws as some of the men elected to Congress know about the Federal Constitution, or Calvin's confession of faith. By chasing the harmless microbes and instilling the public mind with the fear of contagion, and the benefits of quarantine and vaccination, we have quite lost sight of the enormous meaning of the "big four."

No thinking man will disagree with me when I say that we should eat only to furnish the body with the proper elements for nourishment. Only with this object in view should we eat. But instead, many and various are the reasons for satisfying the appetite, especially among civilized people. We often eat from force of habit, for society's sake, to tickle the palate, etc. The question as to *why* we eat goes far towards asserting the *how*. We should, in eating, chew the food until it is thoroughly mixed with the saliva, whether you do this fast or

slow is, as a rule, of little importance. In this way we get the richness in taste and full nutritive value out of the food. Do not make a race track of your food-pipe while eating. Eat only when you are hungry and of that which is ordinarily called plain food, and eat them as near like nature made them as possible, and you will have little trouble having it adjust itself to the wants of the body. Do not eat when you are very tired or excited, worried or angry. If you must eat under these conditions, it should by all means be only a portion of the meal. Remember that the "big four" must always be considered and weighted in all their parts and not taken singly.

Next comes breathing, through which we furnish, from the universal dynamo, the power that circulates the blood and oxidizes or burns up the food eaten, and without which the food would be of little value; any more than it would be to furnish a stove or furnace with the best of fuel without a good air draught. Failing to recognize this point is what deceives so many people who pay particular attention to their food and but little or no attention to furnishing the body with the proper amount of oxygen to burn it up. So we see breathing good air and having normal blood to take up the oxygen is even more important than eating itself. Just as poor fuel with a good air draught will often give a better fire and produce less ashes, smoke and clinkers than will good fuel with a poor air draught. This, in a short time, causes excessive accumulation of ashes, smoke and clinkers in the human system, and clogs up its grates, flues, and chimneys, which ordinarily are termed the skin, kidneys, and lungs. When this universal air draught or, in other words, the atmospheric conditions, together with our own acts, are such as check the air draught of the human furnace, it will lower the fires of life and will retard elimination. Those whose flues, pipes and chimneys are not kept clean will accumulate enough waste matter to clog them up, and when this occurs we will hear of disease bobbing up in the most favorable localities, and we call it an epidemic of small-pox, scarlet fever, diphtheria, etc. The individual conditions, age, environments, and the kind of work done, will determine which one of these diseases will manifest itself.

Small-pox usually breaks out among those who produce large quantities of urea, uric acid, etc. This is why small-pox usually appears first among the hard-working laboring men, or the dissipater, Is this not a logical explanation of the cause of epidemics? It is common sense and will prove true in every instance when put to the test. Then, what more do you want? Again, we see that in order to prove the cause of epidemics, we must take every phase of the "big four" into consideration.

Under the head of working, we must include everything that man does that will exhaust energy. In a sentence, learn to estimate your physical capacity, then select the proper kind of work or vocation particularly adapted to your capacity and work within the limits of this capacity, whether it be mental or muscular work, or both. This, in a nutshell, tells it all. Yet a small volume could be written to elaborate the above thought in detail.

The modern revival of the dogma of the nobleness of work has been pushed too far. It has become almost as pernicious and extreme as the old and now unfashionable worshipers of idleness. There is no more deep-rooted cause for disease in this country than overwork or working beyond one's capacity. The employer crowds his workmen beyond natural endurance, wrecking their constitutions; while, on the other hand, the employer very often works even harder, and in the end suffers even more than his laborers. This condition of affairs must be stopped, as it is deteriorating our nation's physical capacity. I believe in a harmonious and pleasing relation between the employee and employer, each giving a little attention to each other's needs and requirements. There can be no doubt that such little indulgences and considerations would be repaid with compound interest. A little foresight would reveal the fact that an overworked man is not as profitable as a man who keeps well rested.

Professional and business life is becoming literally a battle, and men are falling by the hundreds in the thick of the fight.

Nature is bound to disclose these abuses in some form or other. Nature is a great disclosure of unfinished truth. Her facts shine out and so do her principles. She will never falsify herself, nor permit any of her children to do so. Nature compels all to fly her flag at masthead, whether it be a flag signifying health or disease. Nature labels all her children, and these labels can not be washed out or counterfeited.

The human being, like any other machine, will wear better and longer if worked and kept properly oiled than if it is allowed to stand idle and rust. A machine run beyond its capacity, or run when there is irritation or friction, will soon wear out at the point of friction, which may make the whole machine useless. It is just so with the human machine. Irritation and friction will wear it out faster and in a shorter time than smooth and hard work would in many years. These facts are very important, and there is no way of receiving any benefit from them except by each individual being educated to understand his own machine, finding whether or not it has any weak points and to work and regulate his life in accordance to his capacity. This capacity is no stronger than his weakest organ or part. The law that action determines structure must not be overlooked in nature, and where parents are educated to understand these principles and to apply them, they can by judicious exercise improve the weak organs or parts in their offspring, to a large degree, by keeping the strong ones in the background. But nowadays parents are too apt to keep the strong traits of their children active, to show the neighbors how smart they are. Of course, as I stated in the December article, it is still better to correctly abide by nature's marriage laws, by mating properly and carefully, preparing the germ and mother soil, and thus have well-balanced children from birth. Then, with a little care, there would be very little or no sickness all through life.

I can not conceive of anything that can be put in the English language that should be more earnestly sought and more thoroughly established among all mankind than the proper education of the young in our schools, and to keep it before the people in after-life, so they will never forget the necessity of understanding and applying these principles. Each one must apply them to himself or herself, in accordance with their own physical capacity and particular environment in which they live. To accomplish this, public sentiment and legislation should compel harmonious relations between the employer and employee, and especially a reorganization of our social status, which, I believe, does even more harm than the former. A few selfish and ambitious workers sometimes excuse their error, and say that life depends more upon the value and amount of work done than upon the number of years they might live. The short-sightedness of these men can be easily shown. If a man kills himself by overworking during a space of twenty years, it would be a rare instance if this same man could not have accomplished more in forty or fifty years, and at the same time enjoy a long life by making his laboring hours a pleasure instead of a drudgery. Another error committed by so many of our active men and women is that they will work at high speed for many years in order to live and enjoy the results of their labors. Both of these are injurious to health or a long life, because both are extreme measures. Labor and pleasure should go together in order to reap the benefits of either. A man who has been active through life and all of a sudden stops working altogether, will usually decline in health and cut his life short. Here again, we run up against the old law, the law of balance and proportion. In order to correctly measure your work by your physical capacity you must take the sum total of energy used, mentally or physically, in pleasure or sorrow, in social or sexual life. In short, every act and thought uses up energy; moderation in all is conducive to health. Idleness is as productive of disease as overwork. A reasonable balance in all things is nature's demand.

Sleeping.—You are a sick person every night of your life. The difference between going to bed tired at night and a patient sick of typhoid fever, small-pox, and the like, is one of degree only.

Whether this thought was worth the labor or not, it took me two years to frame it into a sentence. I wanted a sentence that would fairly express the primary cause of disease in a nutshell. It shows how little in the past we have realized the value of sleep. To carefully follow out the full meaning of this sentence would practically mean the abolishing of disease, especially those of the zymotic and nervous varieties.

Every form of animal life requires sleep. Love of sleep is quite as strong an instinct as love of food, because food nourishes the body, and sleep recuperates or cures it. We should get up well every morning. If we do not, we are certain to gradually run behind in our physical bank account. This proves that sleeping is quite as important as eating. The luxury of sound sleep is one of the greatest means given to man or beast for restoring and invigorating the whole system. No one should allow business or anything else to curtail this luxury, and parents should promote it in children, instead of drumming them out of bed early. Indeed, the best way to do the greatest day's work possible is to get a complete sleep the night before. Work with head or hand, or both if you wish to, as long as you can sleep sufficiently, but be sure and stop as soon as your sleep departs or ultimate breakdown will surely follow. Keeping well slept out and rested will add immensely to your capacity to enjoy, endure and accomplish much, and, at the same time it promotes all the other life functions. The excessive accumulation of waste products during the day, and the loss of energy in excess of production, should be recuperated and balanced up by rest and sleep before the next day's work is begun.

Excitement of the brain and the nervous system, due to mental troubles and over-exertion, are common in this country and prevent a due supply of sleep. If you would but stop and think that we are using up the very best of physical ammunition upon game that is not worth it, there would be much more splendid energy reserved, instead of using it up in anger and passions upon other people. We should sharpen our sleeping appetite and prepare ourselves mentally and physically for this delightful repast and grand restorer of exhausted energy. Medicines are of little value when compared to good sleep; therefore, it is bad practice to awaken a patient to give medicine. When a sick patient is getting good, natural sleep, it is the very best sign. Being disturbed when once asleep is as bad as a shock when awake.

Many physicians are killing themselves by unnecessary night work, just because there is more money in it. Nearly every night call can be avoided, because most of them are unnecessary. A patient will surely feel worse after midnight, and the physician is called. In most cases he knows it is unnecessary, but he wants the fee. I know from experience that night calls can be made to be the exception. I would tell the family and patient how he or she would feel during the night and not to become alarmed, as they might look for those symptoms and getting me out at midnight would do nothing but make them expense. I have seen many a physician go to his grave in the prime of life on account of the greed of trying to get in all the night calls possible. We rarely find that the laborer wants for sleep. It is the mental worker or the person who keeps himself or his nervous system unnecessarily irritated by letting every little thing annoy him and thus prevent sleep. A man who is engaged in strenuous mental labors and keeps his brain congested, is certain to have wakeful hours until the circulation is balanced. He should understand these little rules and laws, and by some cheerful diversion, such as amusing himself with his family, or otherwise, bring about a balance in the circulation. This is especially valuable when combined with a brisk walk and cheerful mental inclinations. The stomach, when filled with food, will attract large quantities of blood, which is necessary to carry out its functions. When the muscles are active they likewise attract large quantities of blood. These are well-known facts, and the medical profession insist that the blood is propelled by the heart. We are certainly a very thinking and philosophical class of men.

Some people in this country are afflicted with small-pox because they are too lazy

to work enough to keep the peripheral circulation active, and thereby cause internal congestion, which leaves the skin an easy prey to the various atmospheric changes. An active skin circulation is essential to health. Impressing our nervous and irritable women with the necessity of understanding and following these simple laws of balance would do a hundred-fold more to restore the health of peevish and nervous wrecks than will drugs. Many people are becoming educated to the necessity of airing their sleeping rooms and living rooms, and the value of circulation air, but it is astoundingly neglected by a large percentage of the public, even at the present time. If the reasons were explained to the public why proper air is so necessary, that air is the power that circulates the blood, that it is the power that assists in eliminating the poisons from the body, we would hear much less of small-pox, and the other forms of the so-called contagious diseases. Of late years, this class of diseases is not very prevalent among the better classes, but many of the laboring people are still in the habit of keeping their houses closed up in order to save fuel; sometimes it is done through ignorance. When such a condition is combined with unfavorable atmospheric conditions, gradual accumulations must take place, and small-pox, scarlet fever, etc., are sure to break out in those localities. This being true, and it also being true that the medical profession claim to teach the public how to prevent disease, shows an inexcusable negligence or ignorance of the profession. The fact stares us in the face that if the profession would give the public what they actually claim to give them, more than one-half of the physicians would have to go out of business. These are two widely-separated and antagonistic propositions. I don't see how they can live together, any more than Divine love and the devil himself. I have always maintained that a separate organization should exist for the purpose of educating the people, and this body should see that the people were given the opportunity to live right and that they did live right. Then the physician's duty would be solely to properly treat those who through ignorance or negligence should violate the laws here set forth. No man is going into any kind of business and then stand in front of his store and demonstrate to the public that they can get along without buying his goods.

370 Harmon Street.

[Written for the MEDICAL BRIEF.]

Ship Disinfection.

BY GEO. H. TICHENOR, JR., A. B., M. D.,

Former Medical Inspector and Yellow Fever Expert Louisiana State Board Health; Nominee of Nicaraguan Minister to United States for Membership in Yellow Fever Institute; Member of the Association of Officers and Surgeons of Confederate States Army and Navy, Etc. New Orleans, La.

(Continued from page 58.)

Since it is an admitted fact by scientists that the stegomyia fasciata is responsible for transmitting yellow fever from the sick to susceptible individuals, and that malaria is due to a special species of mosquitoes, it is evident that the regulations concerning ship disinfection will, sooner or later, have to be changed. My own experience in the last epidemic in Louisiana has proven, to my mind, very conclusively that sulphur and pyrethrum are almost worthless drugs for fumigation. While I do not deny the fact that mosquitoes can be effectually destroyed by these drugs with proper precautions, yet in the case of an epidemic, or where rapid work is necessary as, for instance, ships in transit, it is almost impossible for this to be done properly with an ignorant or negligent crew of fumigators. The frequent complaints of ship owners and property owners of damage to fabrics or colors, etc., done by regularly employed fumigators, is a well-appreciated fact by anyone who has ever been a health officer.

Another disagreeable feature confronts the health officer in regard to ship disinfection—mosquitoes are carried by the wind for the distance of ten miles from shore. I have observed this fact, although it is disputed by many. I have been on ships coming into port which had no mosquitoes on board, and have observed a drove of the stegomyia fasciata blown to the ship, which at the time was fifteen

miles from shore, according to the ship's "log."

Considering everything, it appears to me that pine tar is the best disinfectant that can be used.

During the last epidemic pine logs, where they were plentiful, were burned in infected quarters by me. My experiments have proven to me that pine tar was efficient. There is a practical point to be considered in its use and that is unless it is well spread out over the surface of a good fire only a portion will be volatilized and the remainder will char and catch fire, burning with a dense, sooty smoke, a feature which would be disagreeable.

4007 Magnolia Street.

[Written for the MEDICAL BRIEF.]

The Practice of Homeopathy.

BY N. SISCA, M. D.,
Killarney, Queensland, Australia.

(Continued from Page 64.)

VIII.

Let us now see, in a small way, what are the practical bearings of the principle *similia similibus* on the process of building up the so-called "pathogenesis" of a given drug, or, in other words, on the process of ascertaining from the homeopathic point of view and for homeopathic uses the therapeutic properties of a drug, such, for instance, as carbolic acid, which is common to both schools.

Taking Ringer's "Handbook of Therapeutics" as the authority for our side, we find that carbolic acid is first of all an antiseptic, which accounts for its manifold uses in various dilutions as a topical application to the throat, to gangrenous and ill-smelling sores, etc., as a wash in sloughs of the mouth, for injection into the cavities of large abscesses, etc. Next we find it recommended as a local anesthetic in burns, erysipelas, pruritus, etc., and finally as a remedy for inhalation in bronchitis. As to its value for internal use, we are told that it is an indifferent antipyretic, and also that taken in drop doses it prevents decomposition of the blood. From other sources we learn that it is given to check sickness, to arrest diarrhea, to remove intestinal worms, and that it is helpful in whooping cough. Many years ago it was suggested that it might be of service as an intestinal antiseptic in typhoid, and of late years it has been recommended externally in smallpox and hypodermically as a remedy for tetanus and as a local analgesic.

Turning now to homeopathy, we find on the one hand that homeopaths make as much use as we do of the antiseptic and anesthetic properties of the acid, and on the other that the many cases of carbolic poisoning which, from a general therapeutic point of view, have been, as it were, a dead letter to us, have instead been a source of much information to them, and that not only they have not been slow in turning it to good account, but have also confirmed and supplemented it with their provings. Thus we find that their "pathogenesis" of carbolic acid has been built up from symptoms collected from twenty cases of poisoning and as many provings, and those symptoms are arranged in the following "schematic' form:

Mind—Symptoms from poisonings. "The man uttered a cry, and tumbled off his chair, unconscious * * * stertor, agitation, groaning * * * respiration irregular, labored, pulse not quick, very compressible and occasionally intermittent, sensibility almost entirely lost. At the end of two hours recovered consciousness, but remembered nothing of what had passed." "I found him (after three hours' exposure to the fumes of strong carbolic acid) in violent convulsions, with trismus and blood passing from the mouth in consequence of the teeth having wounded the tongue; quite comatose, face and neck livid, breathing stertorous, extremities and surface of body cold, pulse scarcely perceptible," etc., etc.

As these symptoms make up a very fair picture of an epileptic fit, in obedience to their "law of similars," homeopaths recommend carbolic acid as a remedy for epilepsy.

Head—As the cranial symptoms produced by the acid are very similar to the symptoms of migraine, it is accordingly put down as a remedy for migraine.

Throat—Although in poisoning the effects of the acid on the throat are no

doubt chemical, yet the results of the provings show that in fairly large doses it causes a certain amount of congestion of the pharynx and the trachea, consequently it should, in small doses, be of service in congestion of those organs.

Chest—As both provings and poisonings point decidedly to pneumonia, the acid is strongly recommended as a remedy for the critical stage of that disease.

Heart—Large doses, as in poisonings, render the pulse almost imperceptible, fluttering and thready; infinitesimal doses increase its frequency.

Kidneys—Carbolic acid has caused acute nephritis, consequently it should also be a remedy for it.

Digestive Organs—The most common effects of moderate doses on the stomach seem to be nausea, very frequently followed by actual vomiting, both of which symptoms should be curable by small doses.

Skin—Large doses cause general irritation, which small doses should relieve or cure.

Genital Organs—Substantial doses in the male provers caused weakness, relaxation and nocturnal emissions, for which complaints small doses ought to be useful.

As in a surgical case, carbolic dressing caused something similar to pyemia, the acid in small doses should be thought of in treating pyemic conditions.

Here, then, we have a fairly typical instance of the method followed by homeopaths in trying to find out what a drug is good for. So far as we are concerned, all that we know of carbolic acid as a medicine does not practically go far beyond the limits of its uses as a remedy for external and topical applications. We certainly have records of *post-mortem* examinations in cases of carbolic poisoning, but our interest in them has always been limited to their pathological and medico-legal aspects. Most of us are also more or less familiar with the symptoms observed in those cases, but however much there might have been in them for us to learn from a general therapeutic point of view, we have not, and could not have, learned it, merely because we have never even suspected that there could be anything in them worth learning beyond what is the direct concern of pathology or forensic medicine.

But we have seen that it is not so with our friends, the homeopaths. Their *Materia Medica* would be the poorer by a good half without the large number of symptoms they have been able to collect from poisonings of all sorts, whether it be carbolic acid or aconite, arsenicum or belladonna, phosphorus or plumbum. And if we want to know how it is that they have found therapeutic uses for carbolic acid which we have not; what it is that has given them the clue which we have never had, and why a case of poisoning should be an open book to them, while from the point of view of general therapeutics it is a sealed one to us; the answer is: because the principle *similia similibus curantur* teaches them to look for symptoms everywnere, more especially in cases of poisoning, where the objective and subjective symptoms are the surest and most reliable landmarks in what they call the "pathogenic power" of a drug.

[Written for the MEDICAL BRIEF.]

Influenza and Typhus Fever.

BY JOSEPH D. HARRIGAN, M. D.,
New York City.

In a paper recently on "Deadly Parallels in Disease," the writer compared the symptoms found in cholera with those found in influenza, and drew attention to the remarkable analogy existing between the two sets of symptoms.

Mention was made of the fact that a strain of influenza ran through all the epidemic diseases.

A change in the sequence of symptomatic happenings may mask this relationship at times, but can not eliminate it. In a manner as decidedly marked as in cholera do the symptoms of typhus fever exhibit this relationship to influenza. A comparison of the symptoms in both diseases will prove as interesting, I have no doubt, as that between influenza and cholera.

With regard to typhus fever, Lebert says (Ziemsen's Cyclopedia, Vol. I):

"In the beginning, a catarrh of the conjunctiva or of the buccal mucous mem-

brane is more common; a few days later a low degree of bronchial catarrh takes place, at times accompanied by laryngeal catarrh, hoarseness, and difficulty in swallowing. In rare cases I have seen a severe bronchitis appear as the main feature of the disease, just as in the severe bronchitic forms of typhoid fever. The congestive febrile stage at the beginning of this disease is accompanied by manifold catarrhs, analogous to the acute exanthematous affections."

The first stage of the disease may be called a congestive-febrile one. When the fever appears, the skin is hot, often slightly reddened, especially that of the head and face, the cheeks being red and swollen, the eyes being somewhat red. During this period the patient complains of an extremely severe and constant headache. Noises in the ear are a frequent symptom. The pains in the limbs and joints are more severe than in typhoid fever. Symptoms of catarrh are not uncommon, as sneezing and slight sore throat. The pronounced redness and swelling of the face and eyes during the first week often end, in the latter instance, in a conjunctivitis.

In addition to the accelerated respiration due to the fever, abundant râles are observed in the chest, with tolerable constancy, and the patient is troubled with a frequent dry cough, accompanied at times by a scanty, mucous expectoration. Swallowing is rendered difficult on account of dryness of the pharynx.

I have found, almost constantly, affections of the organs of respiration similar to those occurring in typhoid fever, though less in degree. Bronchitis usually occurs during the first week; the cough is slight, there is little or no expectoration, no difficulty of respiration, and one hears merely isolated, rather sibilant râles.

During the second week the bronchitis may become diffused, terminate in bronchiolitis, connected with atelectasis, and the condensation, without infiltration, of larger portions of the lungs. In such cases the symptoms are very decided, may even predominate, so that one might speak of a bronchial typhus. Indeed, I have seen cases of extensive purulent bronchitis where the eruption was absent, and where the diagnosis was established merely by the range of temperature and the enlargement of the spleen. A considerable number of the fatal cases owe their unfavorable course to a bronchiolitis, broncho-pneumonia, or diffuse pneumonia, while extensive pleurisy and gangrene of the lungs are rare. Of laryngeal affections I have seen only, though repeatedly, simple catarrh, accompanied by hoarseness. In many epidemics a diphtheritic croup has often been observed.

Secondary diphtheritis of the pharynx and upper part of the respiratory tract, also ulcers of the larynx, are among the rarer "complications."

"Parotitis occurs early in many epidemics, likewise often, even in twenty per cent of the cases." (Schilling, New York, 1852.) Before proceeding to a consideration of the symptoms occurring in influenza, almost identical, if not absolutely so with the above-mentioned symptoms of typhus fever, I wish to file a most strenuous objection to the custom of terming the various localizations of the disease processes in the affections under consideration as "complications."

I have repeatedly spoken of this misleading term in various papers. Reiterating what I have said at different times, I desire to repeat with as much emphasis as I can, that we are no more justified in calling these intercurrent localization of disease "complications," than we would be in using the same term with reference to the localizations of tuberculosis, scrofula, syphilis, scorbutus, or any other of the constitutional diseases.

These so-called "complications" should properly be referred to, as *e. g.*, typhous laryngitis, influenzic laryngitis, or typhus bronchitis, influenzic bronchitis, etc., etc., as the case might be, just as we speak of tuberculous laryngitis, syphilitic laryngitis, scrofulous periostitis, etc. They are an integral part of the whole process transpiring, and should be so regarded, and not as merely local affections interjected at times into the case, as this term would mislead us to think.

Taking up the symptoms of influenza, I find it necessary to cover almost the same ground, and follow the same footprints that I made in comparing influenza with cholera.

Zuelzer, in his article on "Influenza" (Ziemsen's Cyclopedia, Vol. II.), says:

"Almost invariably a more or less considerable portion of the mucous membrane, especially that of the respiratory organs, is affected, and this is the characteristic feature of the disease. The symptoms are essentially of a catarrhal nature. We find most frequently marked cold in the head, with considerable discharge from the nose and, sometimes, epistaxis; redness of the conjunctiva, with abundant lachrymation; catarrh of the mucous membrane of the throat, larynx and bronchi; also sore throat, difficulty of swallowing, hoarseness, tendency to cough, and a burning or tickling sensation in the throat. The mucous membrane of the cavities of the nose, mouth and pharynx are generally found reddened, and the tonsils swollen."

At the very beginning there sets in a very tormenting, convulsive, dry cough, which becomes paroxysmal, especially in the evening and at night. The sputa are very scanty and muco-serous. Auscultation frequently reveals sonorous, or in places, crepitant, râles. There also occur cases where the auscultatory phenomena are very insignificant or absolutely wanting.

Frequently, there are only hyperemia of the lungs, and intense bronchitis, but, also frequently, catarrhal pneumonias, which are to be considered as a continuation of the bronchitis into the vesicles of the lungs.

Besides this, croupous pneumonias also occur, and are said especially to involve the period of convalescence. These "complications" appear not to be unusual.

Pleurisy, without accompanying inflammation of the lungs, appears to be rare. Croup and false croup are, sometimes, present. Parotitis, with salivation, is sometimes observed.

The remarkable similarity of symptoms hitherto presented must certainly appeal to the fair-minded observer as due to something more than mere accident, and must compel us to consider them as essentials of both diseases.

Proceeding to a consideration of the digestive symptoms in typhus, we find, according to Lebert:

"The affection of the digestive organs is, for the most part, influenced by the severity of the fever, and consists rather of disturbances of function, or of catarrhal conditions of the pharynx, stomach, and intestinal canal.

"Severe diphtheritic complications in the pharynx, at times of a destructive, almost gangrenous character, occur sometimes in typhus wards, particularly where many cases are crowded together in confined spaces.

"Diarrhea is absent in many epidemics, in others frequent. When there is no diarrhea there may be a tendency to constipation in some, while among others the bowels are regular. Diphtheritic inflammation of the colon may occur as a rare, secondary disease. It seems to me very remarkable that Griesinger should state the splenic enlargement is absent in many epidemics, as found, for instance, by Oesterlen in the epidemic at Dorpat. The absence of enlargement in one-fourth of the cases proves that this lesion is not so essential to typhus as to typhoid fever. But that the splenic enlargement should be absent in entire epidemics is, to say the least, remarkable."

Passing now to influenza, we find, according to Zuelzer:

"The mucous membrane of the digestive organs is likewise affected in many cases, although generally not to so high a degree. Loss of appetite, increased thirst, a coated tongue, a bad, pasty taste, sensitiveness of the epigastrium, and, not infrequently, colicky pains and diarrhea, or nausea and vomiting, accompany the disease.

"In other cases there is persistent constipation."

Taking up the nervous and other symptoms in typhus fever, we find that, according to Lebert:

"In febricula and in the milder cases the nervous system is but slightly affected; but, on the average, typhus produces earlier and more decidedly than typhoid fever, great prostration of the strength, subjective sensations of extreme debility, indistinct speech, twitchings of the limbs, and protruded tongue, together with every transition, from dullness to drowsiness, sleep, stupor, and coma. Delirum is usually of a mild type, only at times violent and wild.

"Curiously contrasted with the somnolent condition, especially during the second week, and by no means rare, is the decided hyperesthesia of the entire surface of the body.

"The headache is marked, as in typhoid fever, and ceases after a few days, while the pains in the back and limbs during the first few days of the disease are much more pronounced and severe than in typhoid fever.

"Giesinger rightly attributes the deafness to catarrh of the outer and middle ear. Spasms and convulsions are rare, though they are, apparently, more common in many epidemics."

Taking up, now, the nervous symptoms of influenza, according to Zuelzer, we find:

"The prostration of the strength is very great from the beginning; the patients feel exceedingly weak and exhausted, and soon take to the bed. They complain of severe headache, especially in the forehead, in the neighborhood of the root of the nose, and in the sockets of the eyes. It is often stated that the pains are experienced in the passages and cavities of the head ' lined by the Schneiderian mucous membrane and its processes, especially in the frontal sinuses, but sometimes also in the antrum of Highmore, the nasal ducts, the eustachian tubes, the drum of the ear, etc.

"In some cases the whole head is involved, or there is a marked hyperesthesia of the skin of the head and neck. We regularly find, together with considerable depression, very severe pains in the limbs. At times they are limited to particular muscles, tendons, or ligaments, or are perceived as a generally diffused hyperesthesia over the whole body.

"In addition to these, there also occur in influenza several nervous symptoms, as happened very often in the epidemics of 1782, 1837, and others. Patients are often unusually restless, sleepless and anxious. If they get up they are frequently dizzy. Mild delirium occurs not infrequently, but more intense forms are also observed. In contradistinction to this, somnolent states show themselves in some epidemics; in the epidemic of 1712, which was specially marked by this, the disease acquired the name of sleep sickness, from the frequent occurrence of this symptom.

"In the more severe forms there were sometimes observed painful cramps in the calves, and twitchings of single muscles, trembling of the hands, subsultus tendinum, etc.

"The severity of the attack is also evidenced by the change in the expression of the countenance. The patients have a suffering, anxious and depressed look. According to Landouzy and Biermer, they sometimes even have a typhoid appearance, while in other cases the face is only a little altered."

Carefully comparing the two sets of symptoms, so far presented, I have no doubt but that the reader will perceive that there is not one symptom exhibited in the one disease that is not duplicated in the other. It is true that the symptoms are not always as intensely developed in influenza as in typhus; that is, taking an average of the severity of the two diseases, but neither are the symptoms found in the various epidemics of either disease identically the same.

Cases of typhus in certain epidemics, from a perusal of the symptomatology of them, must have been so unmistakably identical with cases of influenza that it would be ridiculous to regard them as anything else but the same disease. However, leaving this aside for the present, let us take up the so-called typhus eruption, and compare it with the eruption found in influenza.

Lebert says:

"In spite of the numerous peculiarities of the various forms of typhus fever, petechial typhus, more than all the others, shows an additional point of contact with the infectious exanthemata, and I have often called the attention of the students in the ward to the resemblance between a fresh and extensive typhus eruption and that of measles.

"In the second half of the first week, and particularly towards its close, the characteristic eruption generally appears; it is by no means rare for it to occur at the end of the week, and I would call particular attention to the fact that I have seen cases of typhus fever in which there was no rash at all.

"The roseola of the exanthematic form of typhus does not perceptibly differ in quality from that of typhoid fever. The

eruption 'is much more abundant on the chest, abdomen, back, extremities, and even on the face,' than that of typhoid."

Professor Lebert then proceeds to describe the characters of the eruption, which it is unnecessary to repeat here. Further on he says of this eruption: 'I must again protest against its possessing any specific character."

The different epidemics have, evidently, furnished numerous variations in the character of eruption developed, so much so in fact that it seems ridiculous almost to set very great store by it.

Now, with regard to the eruptions that have, at various times, developed in influenza, there seem to have been numerous varieties, exactly as in typhus fever.

Zuelzer says of them:

"The statements of the earlier observers about the 'complications' of influenza with exanthemata, such as miliaria, roseola, urticaria, petechiæ, scarlatinal spots, erysipelas, etc., seem to refer, as Biermer assumes, chiefly to miliaria and urticaria."

Whether this assumption of Biermer's is correct or not is unnecessary to discuss here. The fact is that observers to whom we must certainly grant intelligence, and, likewise, powers of scientific observation, have noted variations in the character of the eruption in influenza, and these variations run the entire gamut of similar variations that characterize the numerous forms of typhus fever, and that differ so widely in different epidemics.

Having thus briefly outlined the remarkable similarity of nine-tenths of the symptoms of the two diseases under consideration, it seems impossible to the writer to escape the conclusion that the one disease is founded upon the other, if, indeed, they are not identical.

To split hairs over the color of a few spots, their profuseness, or the reverse, their locality, their various characteristics, etc., when it is shown that they suffer wide variations in different epidemics, as likewise in different individuals in the same epidemic, seems to me anything but a scientific method of getting to the root of these diseases.

The same may be said as to the presence of or absence of enlargements of the spleen, acknowledged to be absent in one-fourth of the cases.

The one disease is certainly more severe than the other, but that appears to be the only important difference between them, and is easily explainable on the ground that in the one case there is much less in the active agent causing the disease in operation in the system, or else that the activity of the same agent is greater.

The result would be the same, a more intense development of the affection, as likewise a more profound involvement of the anatomy and greater interference with the physiological functions.

We have in syphilis a constitutional disease differing very widely, when viewed in its primary, secondary, or tertiary aspects, yet no one would dream of calling them different diseases.

It is exactly the same with epidemic disease. Where we find diseases in which the symptoms are almost exactly duplicated, it is impossible to escape the conclusion that there is a common basic groundwork upon which those diseases rest, and *that* one must be the foundation which exhibits its peculiarities throughout all the others.

What might be called the primary form in which epidemic disease of the character of typhus fever, cholera, etc., shows itself, finds no better expression for exhibiting its simple, foundation-like characteristics, than in the symptomatology of influenza.

Essentially a constitutional disease, liable to develop its peculiarities in any part of the body, wherever the blood supply and electric supply circulate, making its presence felt in places of least resistance, influenza shows itself primarily as a disease of mucous membranes.

It seems reasonable to consider, though, that the disease is not always limited to the mucous membranes.

Its transition into the deadliest of scourges from being only an extremely annoying affection, can readily be predicated on the basis of an overdose of the poison absorbed. No part of the system is exempt from its attacks, consequently its combinations of symptoms must be innumerable, each new combination offering material for extending the nomenclature of medical literature.

Other factors, no doubt, enter into the matter at times, each one enacting a certain part in transforming influenza from its original, more or less simple form, into complex varieties, but through all its protean aspects, it seems to me, that it should be incredibly easy for anyone looking beneath the mere surface of things, and not warped in his judgment by every little idiosyncrasy of the disease that might present itself, to immediately recognize it.

Influenza, entering, as it does, into the composition of many of the world-wide epidemic diseases, appears to be the unit among them, upon which they seem to be unmistakably based.

Having, thus far, in this article compared influenza with typhus fever, and in a previous article, as mentioned above, influenza with cholera, it will afford me great pleasure at some future time to take up other of the epidemic diseases and by the same method of comparison be successful in showing that influenza is the foundation and basic groundwork upon which they are all constructed.

Whether or not my efforts in this direction are justifiable, I leave to the judgment of my readers.

668 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

An Unusual Criminal Case of Superficial and Deep Seated Gangrenous Inflammation of Forearm.

BY R. MENGER, M. D.,

San Antonio, Texas.

Of late years several cases of gangrenous inflammation came to my notice, caused either by insect or snake bite, with more or less loss of integumental tissue and large scar formations. But the case I wish to report more fully

No. 1.

happened some years ago, and as it was an unusually interesting one as to the cause of the gangrene, it is herewith submitted with several photo-illustrations which I happened to preserve and which I prepared during the healing process of the case.

A young lad was sent to my home office by a police officer, who stated that the lad had had his arm "burnt" by another companion "for the purpose of begging!" It happened during a very severe, cold winter, and it was a pitiful sight to be-

No. 2.

hold how the lad suffered and he had his entire arm wrapped up in dirty rags, emanating a most penetrating odor, which smelled like anything but rose oil. On unwrapping the arm a fearfully inflamed surface, covering nearly the entire forearm—from the wrist to near the elbow—presented itself, covered with gangrenous tissue products and pus.

On questioning the lad about how he got "burnt," he said his companion saturated a piece of rag with concentrated lye and spread it over the arm, for the sole purpose of aiding the lads in begging alms on the streets. (It was a case of "run-away" from parents who lived up North.)

No. 3.

After cleaning the entire inflamed surface with an antiseptic solution and a spray, the entire inflamed surface was covered with a mild zinc and bismuth salve on absorbent lint, and the arm put on a perforated splint. After the third day the inflamed parts were in a more healthy condition, granulating freely, and, after several more days, in order to facilitate the healing process, I concluded to use skin grafts, if possible from the patient

himself. Accordingly, and with the kind assistance of Dr. E. Clavin, of this city, we removed from the upper thigh of the patient a number of good-sized skin grafts and applied them, under proper precautions, according to Thiersch's method in Leipzig, and covered the surfaces with oiled silk, etc. After the second day of this procedure I prepared the photo, No. 1, seen in the BRIEF, showing the numerous grafts well adherent to the large granulating surface. Then, about ten days later, the next, photograph No. 2, was taken, showing the grafts nearly disintegrated, and transformed into cuticular and cicatricial tissue. After another ten to fifteen days, the photo, No. 3, was taken, showing the arm entirely healed, with good, sound skin.

725 East Commerce Street.

[Written for the MEDICAL BRIEF.]

Biochemic Medicine—Salt or Muriate of Soda.

BY J. S. LEACHMAN, M. D.,
Higley, Oklahoma.

I note in the December issue of the MEDICAL BRIEF, page 897, an article by Dr. L. S. White, headed "Should We Eat Salt?" I will begin by saying that salt or muriate of soda is one of the cell salts of the blood, and is just as essential as iron or any other cell salt of the blood. To see a person eating salt shows conclusively that salt is demanded in the system, that there is a deficiency of this cell salt in the blood, and a homeopathic, or one well up in the biochemic treatment of disease, would give natrum muriate (salt) 3X in two and one-half to five grains, three or four times a day, and in a short time the patient would quit his salt eating.

In giving the salt in this way the cells of the blood can take it up, but in the ordinary table or barrel salt it is too coarse or dense for the cells to feast on. Muriate of soda, 3X, can be secured at any homeopathic pharmacy.

It does seem so strange that so many physicians know so little about biochemistry (chemistry of life). The blood supplies the material necessary for forming every fluid and tissue in the body, and for carrying on every process. The body contains both organic and inorganic matter. The organic substances are sugar fats and albuminous matter; the inorganic constituents are water and certain minerals called cell salts. The cell salts are the vital portion of the body—the workers, the builders.

There are twelve salts and should a deficiency occur in any of these workers some abnormal condition (disease) arises. For the benefit of the readers I will name the inorganic cell salts: Flourine of lime, phosphate of lime, sulphate of lime, phosphate of iron, muriate of potash, phosphate of potash, sulphate of potash, phosphate of magnesia, muriate of soda (salt), phosphate of soda, sulphate of soda, silicea.

Here are the twelve cell salts. When a person is receiving a sufficient supply of the proper food and all the cell salts are at par, the workings of the body go on in a good, healthy manner, but from some cause or other, let there become a loss of any of these cell salts and the working of the body is deranged, and the proper thing to do would be to supply the deficiency. There are certain symptoms obtained by long clinical experience by such persons as Dr. William H. Schuessler, of Oldenburge, Germany; Dr. Walker, of Scotland; Dr. O'Connor and others, of America, that points out the cell salt or cell salts that are deficient. I have been using the twelve cell salts over twenty years. I would not want to practice medicine without them. In my bookcase can be found Dewey, Cary, Chapman, and Schuessler. All on the tissue remedies.

I think the reason that we find so many doctors so ignorant on the cell salts of the blood is because the biochemic treatment of disease was cradled or first taken up by a homeopathic physician. We find some physicians so prejudiced against any other sect or school of medicine but their own that you could not induce them to read anything outside of their own school. It is truly a pity we have men so narrow-minded in the profession. However, this is fast giving way, owing to independent medical magazines like the MEDICAL BRIEF.

I trust this will throw some light on the salt question.

[Written for the MEDICAL BRIEF.]

A Cure for Hydrophobia.

BY ELI G. JONES, M. D.,
New Brunswick, N. J.

The first thing to do when a person has been bitten by a mad-dog is to cauterize the wound with caustic potash, then apply a slippery elm poultice, to get up a free discharge from the wound. Give the patient two improved compound cathartic pills at one dose, to get a free movement of the bowels, also give internally tincture echinacea, ten drops, once in three hours. Give the patient a hot vapor bath. If the above treatment is faithfully carried out it will prevent hydrophobia in most any case.

Personally I have had several cases in my own practice, where persons had been bitten by a mad-dog, and the above treatment was used, and though the cases were watched for several years afterwards, yet there never were any symptoms of hydrophobia.

Symptoms.—After a time, from six weeks to eighteen months (called the period of incubation), the patient bitten will experience pain or an uneasy sensation in the spot where he was bitten, if the wound has healed up, the cicatrix tingles, aches, feels numb, cold and stiff, sometimes looks red and swollen. It may open and discharge a peculiar ichor, the pain extends to the central parts of the body, all this is a warning of the coming attack of hydrophobia. In a few hours the constitutional symptoms develop, he is excited and irritable, speaks of pain and stiffness about the neck and throat, he unexpectedly finds himself unable to swallow liquids; every attempt brings on a paroxysm of choking and sobbing, very distressing to witness. This may last two or three days, until the patient dies.

Treatment.—Because certain authors have called this disease incurable, shall we fold our hands and do nothing. Certainly not, it is our duty to try and cure the patient. I want to give to the profession a method of treatment that has proved successful in my hands. I have been called to cases where the most powerful narcotics have been given, yet the spasms continued. I first cauterized the wound with a stick of caustic potash, then applied a hot poultice of equal parts of pulverized lobelia seed and slippery elm; change poultice every hour, encourage free discharge from the wound. If the patient can not swallow any liquids, then give per rectum the following injection:

℞ Tinct. Capsicum.....1 pint.
Tinct. Myrrh.....1 pint.
Tinct. Ladies' Slipper.....1 pint.
Pulv. Lobelia Seed.....4 ounces.
M. Sig.: Shake well.

The above is called "The Compound Tincture of Lobelia," the most powerful anti-spasmodic known in the world. Use a syringe and inject two ounces of this liquid into the rectum, place a napkin against the anus to prevent the liquid escaping. It is well to add about a pint of warm water to the medicine. Wait an hour; if spasms are no better use four ounces of the medicine in the injection. In another hour, if the spasms are not so hard and not so often, give half the quantity of the medicine, viz., two ounces. Follow up this treatment every hour until you get full and free vomiting, then you may be satisfied that you have conquered the disease. When your patient can swallow, drop the injections and give him one-half a fluid drachm of the compound tincture of lobelia in a little water, as often as needed to keep his system well relaxed, and hold off the spasms. The poultice, as ordered should be kept on the wound as long as any symptoms of the disease remains.

While the compound tincture of lobelia, as per formula, is a powerful anti-spasmodic, yet it is a safe medicine to give in such cases. As I have used lobelia in all its different preparations, and in every case where it is indicated I pronounce it one of the best remedies in any *materia medica*, and as I have used it continuously since 1869, my opinion should have some weight. If you are called to a case in the stage where the patient can not swallow any liquids at all, give him about the same thing in pill form:

℞ Lobelin (Con.).....10 grains.
Cyripedin (Con.).....20 grains.
Capsicum.....5 grains.
Ext. Gentian.....q. s.
M. Ft. pills No. 20. Sig.: One to two pills should be given every hour until the spasms are under control and the patient vomits freely.

Every doctor in general practice should keep the above liquid and pills on hand in case he has a case of hydrophobia.

I have given the above cure to the profession because I feel it my duty to try to help my brother physicians to cure a disease whose very name strikes terror to the heart of the common people.

[Written for the MEDICAL BRIEF.]

Introduction to Dr. Mount Bleyers, Article "Reflections on Rejuvenescence."

Who in this life of ours has not indulged in reflections on rejuvenescence. The thought of approaching age, at times, fills us with alarm and regret, and the apparent decay of happy existences is wrapped in mystery for all, philosopher, poet, scientist and layman alike. We all long for some marvelous spring, whose crystal accents would murmur of perpetual summer and blue skies, but, as Dr. J. Mount Bleyer, in his essay, so eloquently points out, nature is the only fountain of youth that is watering this earth and giving strength and rejuvenance to all life.

The earth is but a gigantic workshop, wherein holidays are unknown. Observe the flower at our feet. What is it? Color, perfume, beauty of form if you like, but does it not also represent labor, the production of a little black seed that will, in turn, proclaim the vernal beauty of another year? And now search the vast horizon! All you see is breathing hard, full of activity and haste, astir with the fecundity of the earth. The leaves expand, the flowers are in a hurry, the corn grows without pausing; all the plants, all the herbs are competing as to which shall spring up quickest, and the running water, the mountain stream and meadow brook come to assist in the acts of regeneration, while the sun rising in the heaven is entrusted with the special duty of enlivening the common task.

And it is the same in human life. As the silence of winter will again produce the gayety of spring, a powerful summer and a bountiful autumn, age will change again into childhood, youth and maturity. Old age is but the peacefulness of twilight, the farewell of the sun, which dies at night to be born again in the morning. Therefore, let us courageously perform our task of life. The more we study the secret workings of nature the sooner will we realize, with a feeling of serene consolation, the great simplicity of death, which is merely a returning to spring, where our own lives transformed into new existences will commence the everlasting joys and sorrows of mankind over again.

SADAKICHI HARTMANN.

Reflections on Rejuvenescence.

BY DR. J. MOUNT BLEYER, F. R. A. M. S., LL. D.,
New York City.

Many learned men have spoken and written on the subject which this title bears, and the last words will never be heard or written on rejuvenescense. The word, rejuvenescense, literally speaking, means return to a state of youth. The most glorious principle of nature, impressed upon its every object, life and death themselves are only other names for rejuvenescense. The history of the world and of its contents in all their variety and phases, is no more than the history of its operation; the one great poetic idea of the universe, all phenomena and splendors, spiritual, as well as material, are but parts and elements of it, illustrating and adorning its different modes. Everywhere, since the first morning, has youth been incessantly bursting forth, and creation beginning afresh. "The universe, open to the eye to-day, looks as it did a thousand years ago; the morning hymn of Milton does but tell the beauty with which our own familiar sun dressed the earliest fields and gardens of the world;" all things, says the Apostle, "continue as they were from the beginning of creation." True, there is continual dismemberment and disintegration; the flower fades, the animal falls to dust, but this is not death, it is merely the casting away of wornout vestures, in order that new may be put on. The form, the idea, the actuality, lives forever; the end always reverts to the beginning; from the plant comes the fruit, and from the fruit comes the seed, which again contains the plant within itself. Look at the sculptured pineapple! Nature in miniature; upon its yellow ripeness ensues a beautiful tufted crown of leaves, promising and beginning the whole history over again, the

true phœnix of creation.* The fabled palm is only a metaphor of the world. Turn which way we will we find no "killing principle" in nature, only a vitalizing and sustaining one. Throughout its whole extent, nature is life; in all its forms and modifications, one vast and infinite life; subject, no doubt, to the extinction of particular presentations, but never to absolute and total death, even in its least and weakest things. Anything that looks like death is a token and certificate of life being about to start anew and invigorated. Every end is also a beginning; all things in the world are striving to begin, as well as to finish; marriage once more is the type and exponent. So far from being the destroyer of life, death, rightly viewed, is its nourisher and aliment. A thing does not perish in order that it may no longer exist, but that another of the same or similar kind may enter fresh and beautiful upon the scene, and thus virtually perpetuate the original. "All death in nature is life and in death appears visibly the advancement of life. It is not death which kills, but the higher life which, concealed behind the other, begins to develop itself. Death and birth are but the struggle of life with itself to attain a higher form."† Granted, we do not perceive it to be so if we look at things merely with the outward senses; we perceive it in the degree that our own minds are alive, and apt, from culture and sincere and fervent aspiration after truth, to rejuvenize in themselves. Every thing is alive to the living mind. Death is abundant in proportion as the mind is dead. To estimate our intellectual vitality, at any given time, we have but to ask ourselves, How much life are we conscious of? We speak, in ordinary converse, of youth and age as distinct epochs, and, as a matter of appearance, correctly so. It results, however, from this great law, that so far from being separate and successive, they are contemporaneous and concurrent. Youth does not cease, and age begin. Throughout life their phenomena run side by side, revolving each upon the other, age succeeding youth, youth succeeding age, in the most varied conditions of exchange, and often crowding into the same region. Everywhere in nature we see youth and senility intermingled, presenting themselves alternately, and all together irrespective and independent of annual birthdays. If decay attend upon age, so does it upon infancy; if youth is a beginning, so, too, is maturity. Life rising out of death was the great "mystery" which, in old-time symbolism delighted to represent under the thousand ingenious forms preserved in mythology and ancient poetry, as in the lovely fable of Cupid and Psyche. Nature was explored in her every realm of attestations to it, the results giving to religion new sanctity and illustration, to philosophy, new dignity and grace. Sleep was beautifully called "the minor mystery of death;" since the seeming suspension of life during the stillness of slumber is the pathway to restoration of its powers, and thus a prefigurement of what death is designed for. "Death like sleep," says the illustrious herder, "cools the fever of life;" gently interrupts its too uniform and long-continued movement; heals many wounds incurable before, and prepares the soul for a pleasurable awakening for the enjoyment of a new morning of youth. As in my dreams my thoughts fly back to youth; as in my dreams, being only half-fettered by the bodily organs, and more concentrated in myself, I feel more free and active; so then, revivifying dream of death, will smilingly bring back the youth of my life, the most energetic and pleasing moments of my existence."*

When, then, it is said that death takes things away, it is said wrongfully. It is done by life, the constant aim of which is to obtain a point of departure for renewed progress, pushing out of the way whatever may obstruct. See what curious and striking illustrations are furnished in the physiology of our own bodies. The teeth of the child drop from its little gums, that the teeth of manhood may take their place; the blood, by its tiny particles, supersedes itself as fast as it is formed; every molecule of muscle, and

*The same beautiful onward growth appears conspicuously in several of the new Holland Genera of Myrtaceae, as Melalenca, Metrosideros, Beaufortia, e c.; and a similar phenomena in the canes of the Larch, from the apex of which occasionally extends a leafy root.

† Fichte, Destination of Man, page 27.

*Outlines of a History of Philosophy by Man. Book V, Chapter 4.

bone and brain in an ephemera; our entire fabric is taken to pieces every second of our life, and rebuilt long before we leave it. The bodies of all other animals similarly rejuvenize during the period between birth and dissolution; some, in addition to the molecular renewal, having periodical and most curious replacements of entire organs. Birds renew their plumage, lizards and snakes their skin, the crab even replaces its stomach, forming a new one every year, and casting away the old. Plants also rejuvenize, exemplified in annual renewal of their leaves and flowers. In the higher kinds of vegetation the phenomena are at once so marked and intelligible, as to have called forth the first and, as yet, the only treatise expressly devoted to this magnificent science.*

As a phenomenon of physiological or organic life, rejuvenescence appears under two great general modes, namely, first, return by the individual, either as a whole or in its molecules, to an earlier condition of existence, securing thereby a point of departure for renewed progress; secondly, repetition in a new being, under the law of procreation by male and female, of the entire course of organic evolution. The first has for its object the completion of the form; the second has for its object the repetition of the form. Rejuvenescence, in order to completion, is exemplified in the growth of a child, leading it on to puberty and thence to manhood; that which has repetition for its end, appears in the phenomena of generation and birth. It follows that it is the power of rejuvenescence which mainly distinguishes organic bodies from unorganic, since in their latter form there is neither a graduated development of the individual, nor renewal by procreation; without rejuvenescence there can be no organic development, nor where organs are absent can rejuvenescence ever occur.

The distinction between the two kingdoms of organized beings themselves, as regards rejuvenescence, is that while in animals there is a perpetual dissolution and rebuilding of the entire substance, the devitalized atoms being ejected; plants never rejuvenize a part once completed, but provide for the stability and regularity of the vital processes by developing new parts. The stem once formed and consolidated never alters in the least; the leaves and the flowers when done with, are disengaged, and absolutely new ones are unfolded in their place.

Rejuvenescence in order to the completion of the form, has, accordingly, for its chief process in animals, the decay and renewal of the tissues; in plants, the unfolding of new organs. Both involve a variety of union and contributive activities, but most especially is this the case in the rejuvenescence of the animal, where the full effectuation of the molecular renewal requires and is secured by the grand supplementary process of sleep; in effect a periodical return of the animal to its antenatal state, beautifully corresponding with the resumption of that state in lactation, which is living over again the life of the womb on a higher plan.

During sleep, the inner formation processes by which the body is preserved act undisturbedly and concentratedly. Everyone knows how sweet is the restoration derived from one's pillow when in health; more wonderful, even yet, is that which the patient derives when sleep occurs at the crisis of severe disease. The nocturnal refreshment of the physical frame induces a similar restoration of the spiritual. Relaxed from the tension in which it is held towards the outer world while awake, during sleep the animal sinks into a condition comparable to that in which it lay before consciousness commenced; all images and shapes it is cognizant of by day either vanish or appear only as reflected pictures; unexcited from without, it "gathers itself up into new force, new comprehension of its purpose, much that crossed the waking thoughts, scattered and entangled, becoming thereby sifted and arranged." Hence it is that "our waking thoughts are often our truest and finest, and that dreams are sometimes eminent and wise; phenomena incompatible with the idea that we die down like grass into our organic roots at night, and are merely resuscitated, as from a winter, when we wake. Man is captured in sleep, not by death, but by

*The phenomena of rejuvenescence in Nature, especially in the life and development of plants. From the German of Dr. A. Brann, by Author Henfrey Ray Society's volume, 1853, one of the most important of modern contributions to the philosophy of botany.

his better nature; to-day runs in through a deeper day to become the parent of to-morrow, and he issues every morning, bright as the morning and of life size, from the peaceful womb of the cerebellum." The most remarkable illustration of the bearing of sleep upon rejuvenescence, is supplied, perhaps, in the chrysalis period of insect life. Here takes place that grand retreat and gathering in of vital power which enables the unsightly grub to expand into the lovely, completed and expressive form we call the butterfly; so exquisite a symbol of the spring, when winter, the grub and chrysalis era of the vegetable world, is emerged from the superseded. The analogy is important to consider, because of the common, but mistaken impression that the charming queen exuberance of the vernal season is no more than the work of the few days during which it appears. The beautiful display is in preparation all the winter, just as the butterfly is in preparation in the grub and chrysalis. Spring merely brings the concluding steps before our eyes, as the rupture of the chrysalis the painted wings of the perfect insect. Not a little of the spring begins in the previous autumn, and even in the previous summer. The rudiments of the future leaves of the alder may be found in August; the leaves and even the flower buds of the lilac; the catkins of the hazel make their appearance with the asters and golden-rod; in the bulbs of the hyacinth, the tulip and the crocus, long before they manifest the least sign of vegetation the future blossom may readily be discerned. Insect life, as a whole, is the most perfect example we possess of rejuvenescence, having for its aim the completion of the individual. The true idea of what is so improperly called the "metamorphosis" or "transformation" of insects is development into perfect state. It is no change of one creature into another. The caterpillar contains within itself the rudiments of the future butterfly in all its parts; it becomes the butterfly, not, as commonly supposed, by a monstrous and supernatural mutation, but simply by casting its skin, and unfolding parts previously concealed and immature, first the limbs, by and by the wings, opening more and more, till the idea of the perfect insect is attained. No less striking and beautiful than the analogy of the butterfly with the opening leaves and flowers of spring, is the rejuvenescence, at that season, of the birds. They blossom in the spring like the trees and plants, glossy and tinted in their plumage, and, like the plants again, when they shed their petals, they lose their peculiar spring and summer luster immediately the process of hatching is completed.

To return, however, to the butterfly. In the insect's history we have a lesson of another kind. From time immemorial the butterfly has been the emblem of the resurrection. Anciently, as with the Egyptians, we find it drawn either in its prayer form or as a lovely female child with butterfly's wings. "Employed, subsequently by the Father of the Church, the beautiful symbol shone on their ponderous pages like a beam of sunlight falling through a painted window on the gloom of a cloister." The beauty and truthfulness of the emblem lie, however, in exactly the opposite direction to that ordinarily supposed. Not only is the usual idea of the resurrection, or that of a decayed body being recomposed and reunited after a certain interval to the soul, not represented in the natural history of the insect, but it is altogether contrary to it. What the history does teach is that which is also the true idea of the resurrection. Reaumur, that great and good naturalist, when he discovered the real structure of the caterpillar, and pointed out the discrepancy between the truth of nature and the dogma of the preachers, was denounced as an enemy to revelation.

Occasionally, but rarely, there is a man, a resumption, when old, of the external signs of youth. Cherished from the remotest ages, the idea of restoration of youthful health and strength and bodily shape, by some beautiful stroke of magic, is not altogether remote from fact, though the magic is in nature, rather than art, The basis, probably, of the story of Medea and Æson. It figures in the fables and national poetry of every period of the world. Its most beautiful embodiment, the Fountain of Rejuvenescence, is found in the tales of the Far East, in the romances of chivalry, and in the mysteries.

In the Middle ages it was the symbol of Christianity, renewing the moral strength of the world after the corruption of pagan Rome; and now we have it in a fine picture of one of the best of the French pre-Raphaelite schools.* The alchemists thought to secure such rejuvenescence by the aid of the philosopher's stone, which was not only to ward off sickness and infirmities, but replace men in the vigor of early youth. Vincent de Beauvais attempted to show that Noah's having children when five hundred years old was owing to his possession of this precious secret, whereby he had had restored to him the freshness of his ancient puberty. Modern scientists have sought the same trickster, though without a shadow of success. Vain expectation! Though man may certainly please himself with the reflection that he alone ever steps in the grateful path. The lower animals begin to decay almost immediately after the decline of their propagative power; in man, life is prolonged more or less after virility has ceased, and now and then operates over again some of the most characteristic phenomena of his earliest days.

The cutting of new teeth in old age, return of the power of growth of hair similar to that of the young, and several other such phenomena are abundantly on record, as may be seen at one view in Dr. Mehliss, whose curious work, "Weber Virilisczenz und Rejuvenescenz Thierischer Körper," Leipsic, 1838, has raised the matter into a branch of physiology. Of new dentition, for example, he cites not less than thirty or forty authentic instances, many of them octogenarian. For the appearance of these phenomena it is necessary, he tells us, that there should exist complete energy and integrity of vegetative life, and probably also local excitement.

The second great form of physiological rejuvenescence, or that by which man and all other living creatures, together with plants, renew themselves, as to race is expressed in the phenomena of procreation.

> Like leaves on trees the race of man is found.
> Now green in youth, now withering on the ground;
> So generations in their course decay,
> So flourish these, when those are passed away.

* M. Haussoniller "La Fountaine de Jouvenesce." See engraving in the Illustrated London News, September 13th, 1856.

Here it is that we most clearly understand that death, so called, is the operation of life. The particular aggregation of material elements, carbon, oxygen, nitrogen, and so forth, drawn together and consolidated by the immortal idea of each plant and animal, and by the spiritual body in man, break up and disappear after awhile, but in form remains with us still; its old apparel only parted with in order that new may be put on. Wonderful as are the processes of sustentation and repair in the individual, those of procreation, or the sustentation of the species, incomparably transcend them. No trifling work is the elaboration of a body which shall feed and grow, move and exchange offices of friendship; but to construct one which, in addition to all this, shall be able to engender new beings like itself, is the very acme of skill and miracle. So excellently has the subject been dealt with by other hands, so extensive also is its detail, that here I need only advert to it as one of the most solemn considerations of life, a subject never to be approached without reverence and awe. The unthinking part of mankind look upon procreation as no more than one of the common impulses of nature, and consider the slightest allusion to it improper. Many, even of those who ought to know better, regard it as ignoble and degrading, and its alluring incidents only as palliative and reconciliatory. There can not be a lower idea. In the whole range of delegated offices there is none more honorable and noble than to act for the Father of all, as perpetuator of the objects he has created "for his pleasure;" wherefore, also, the depth and fearfulness of its responsibility, since of all situations a man can place himself in, that of father is the most serious and manifold in duties. Large, indeed, should be the faith in heavenly succor of him who adventures upon progeny. The same is the ground of the brilliant delights which enter into its history, since outward circumstances is always made commensurate with the dignity of that which it accompanies and invests. The beauty which attends on the period when, with the complete evolution of the system, the power is attained of reproducing the species, is one of the most admirable phenomena of

nature. The principle is universally set forth. See how the plant, at its nuptial hour, adorns itself with bright flowers. See how the glow-worm trims its lamp, how the butterfly spreads its gallant pinions. In fishes and mammals puberty is again characterized universally by the development of ornaments more or less striking, such as brightly-colored scales and plumage, horns, manes and beards, the last named enhancing the manly beauty attained at this period in our own species, the female of which is even more largely embellished by the growth of the hair and the development of the mammal, and of the subcutaneous tissue of the body in general, giving to the limbs their matchless "lily roundness." Not only are beauty of form and color now most exquisite. Flowers smell their sweetest during the union of the sperm cell with the germ cell, especially in its central moments, losing their fragrance rapidly when it is completed. In the animal kingdom during the same period, sounds are emitted, pleasing, undoubtedly, to the ears they are designed for, and taking in man the form of poetry and music. The ballad, "To His Mistress' Eyebrows," of the lover, is the exact analogue of the grasshopper and cicada.* That the song of birds has immediate reference to their loves is generally understood. Like the beauty of their plumage, it rises to its highest during the pairing season, and is lost at the time of moulting. All our resident birds that renew their song in the autumn, probably have broods at that time. The thrush and the blackbird, which are heard from the middle of January to October, generally have two broods in the course of the season, and not infrequently three.

But it is not merely a pairing cry, being continued until the young birds break the shell, and, in many cases, until they are able to fly. Probably it produces general excitement in the female bird, while sitting, so as to increase the needful warmth, and a power of more energetic performance by both parents of the various duties of the nest. We all know that there are sounds, especially from those we love, which make the heart beat, and the bosom thrill, and the whole body glow, inspiring us magically and beautifully, and, doubtless, it is the same with the feathered dwellers in the trees.

Holding this sublime power of self-renewal as a part of its very nature, every animal, bird and insect, every tree and herb, down to the humblest moss, is in its procreant capacity an emblem and prefigurement of eternity. Forever rallying onwards, the truest and grandest idea of the Divine Life is unfolded to us in the phenomena of reproduction. Hence that beautiful custom of the ancients of placing seeds in the hands of the dead, and in their tombs and sarcophagi. They perceived that the renovation of a plant, by its seeds, year by year, and from age to age, unchanged in the least of its essential character, is a picture, in little, of immortality. The rites of religion always have reference to the theory; wherever religion has existed, the offices of the living to the dead have invariably formed a part of them, and, as all religious rites are of necessity symbolical, their beauty and intelligibleness show the quality of the faith which employs them. The custom alluded to thus testifies in itself to the antiquity of man's persuasion that he is to live forever.* With mankind, elevation to capacity for the privileges and rewards of procreation, is the effulgent aurora of existence.

Youth begins over again on a higher and more beautiful plan, whatever talents there may be in the soul, now they make their appearance. Early or late, whenever it may be first felt, love, the high priest of procreation, always leads the way to rejuvenescence of our entire nature. No pleasures are so sincere and so enduring as those which come late in life through renewal of one's youth under the sweet agency of a happily-placed affection, nor are any so thankfully enjoyed.

Let me pass on to the renewals that pertain to the spiritual degree of life. In the changes of our feelings we have rejuvenescences quite as beautiful as those of nature. The decay and retrogression which in autumn we see among the plants,

* Abridged, in part Dr. Laycock. British and Foreign Medico-Chirurgical Review, July 1855.

* The early Christians also put seeds in the coffins of the dead, but in their case it was in acknowledgment of the imagery of St. Paul. See an interesting article on the subject in Hooker's Companion to the Botanical Magazine, Vol. 2, p. 298.

providing the means of a charming pallingenesis in the spring, is not more regular and universal than are the declensions we are subject to in ourselves; nor does nature rebound more freely and improved. Whenever there is a return of the heart from unsatisfying, selfish, or ignoble pursuits, to a taste for the pure and uncloying charms of virtue and nature, there we have the restoration of our youth. Wherever there is advance into new and delicious fields of thought and feeling, under the influence of new scenes, or the advent of new friends, or the passing away of what is painful or distasteful, life starts anew in all its plenitude of powers and sentiment. How charming does Disraeli describe the rejuvenescence in old age, of well-cultivated literary taste!* "The steps of time are retraced, and we resume the possessions we seemed to have lost, we open the poets who made us enthusiasts, and the philosophers who taught us to think, with a new source of feeling acquired by our own experience." Adam Smith confessed his satisfaction at this pleasure to Dugald Stewart, while reperusing with the enthusiasm of a student the tragic poets of ancient Greece. The calm, philosophic Hume found death only could interrupt the keen pleasure he was again receiving from Lucian. "Happily," said this philosopher, "on retiring from the world I found my taste for reading return with even greater avidity." Lord Woodhous found the composing anew of his "Lectures on History" so fascinating in the last period of his life, that it rewarded him, Alison informs us, with "that peculiar delight which has been often observed in the later years of literary men —the delight of returning to the studies of their youth, and of feeling under the snows of age the cheerful memories of their spring." In the solitude and night of human life is discovered the unregarded kindness of nature, which has given flowers that only open in the evening, and bloom through the night season.† As morning and sunshine came back in the Hesperis, the evening primrose, and the night-flowering cereus, so do fancy and imagination rejuvenize.

There is abundant illustration of this great law, also in civil, scientific and literary history, especially the last, and it is worthy of observation that the precursor of a new era is always one who refuses to follow the slavishness, extravagances and caprices of exhausted invention, and returns to the freedom, simplicity and integrity of nature. This is why men of true genius, who illumine the world with something new and glorious, are always accused of violating the rules, *i. e.*, refusing to dwell among the tombs. What shallow-minded bigots call "heresy" and "heterodoxy" is often nothing more than the rejuvenescence of a devout and healthy soul, too far elevated above themselves even to care for their censure or wrath.

The great Syndenham, with whom the science of medicine rejuvenized, as it did with Harvey and Hunter, was conspired against to expel him from his college as "guilty of medical heresy." Death, in its blindness, always thinks that its contrary, or life, is the dead condition, as evil always pities the good, and would fain persuade us that itself is the *summum bonum*. When another kind of rejuvenescence was spreading under the genius of Lord Bacon, Sir Thomas Bodley wrote to him remonstrating on his "new mode of philosophizing." New doctrines always displease the small and stagnant souled, who may be known by their having nailed themselves to given opinions, and considering novelties vicious and illegal. Given to fancying that the world has been losing wisdom, instead of gaining it, since the period when they contracted their views, they must work by precedent or not at all, and hence are never anything but mimics. Not so the men of life and power. "The great men never know how or why they do things. They have no rules, can not comprehend the nature of rules. The moment any man begins to talk about rules, in whatever art, you may know him for a second-rate man; and if he talk much about them he is a third-

*"The Literary Character," Chap. XX. See also an original and beautiful "Account of the State of the Body and Mind in Old Age," in the Medical Inquiries and Observations of that most interesting writer, Dr. Rush. Vol. 2. Philadelphia, 1793.

†The number and variety of the flowers which expand or only become fragrant towards evening, show how deeply seated is this beautiful correspondence. Besides the familiar species mentioned, there are the Marvel of Peru, the tuberose, several species of the Geraniaceæ, as Pelargonimo triste; several of the Caryophyllaceæ, as Silene noctiflora and vespertina, and Dianthus pomeridionus; many tropical Convolvulaceæ, etc.

rate," as Goethe said, all great men produce their works as women do pretty children—without either thinking about it or knowing how it is done. All great epochs are epochs of resurrection. Not one of our modern institutions is purely an establishment of to-day. That which is, has already been, only under another and cruder form. The mode may be different, but the principle is the same. The truths we delight in as our own were pleasures to our forefathers; if we do recognize them in our readings in history it is because the ages in their spiral rise have lifted them to a higher level, as a building becomes different when we are close beside it from what it appears while in the distance. Ideas never die. Out of fashion for awhile; lost, perhaps, for generations, they bide their time, then revive, as Ovid says, "*In nova corpora mutata*," "changed into new bodies." No fragment of truth has ever been really lost. Immortal as its origin, every particle is sure to rise again, its resurrection the result of its immortality. All the great "revivals" of the present age partake of this character, and result from this mighty law. Let us be careful, then, how we ridicule even the least of them. Resuscitations can only happen where there is life; the absurdity may prove to be in ourselves rather than in the things. What the many are, such is the individual. The parallel between the soul of man and that of society is exact. "Every man," says Sir Thomas Browne, "is not only himself; there have been many Diogenes and many Timons, though but few of the name. Men are lived over again, the world is now as it was in years past; there was none then, but there has been one since that parallels him, and is, as it were, his revived self." We often cast our eyes towards the future. If we would speculate on it rightly, we must first comprehend the present, and that is best done by contemplating the past. True, in our retrospect we seem to see little more than destruction, but in the eyes of the naturalist this indicates renewal, transition into a new, up-growing time. Not a few of our greatest riddles have their solutions in ancient history, yea, even the fables of mythology; for mythology is not, as foolish people fancy, profane romance and nothing more, but sound and living prophecy, a sort of secular inspiration, suited to the times to which it was given, and intended to receive fulfillment in later days. We talk of the golden age as gone. Not so; the golden age is both with us and to come.

The highest rejuvenescence of all is man's return to youth in heaven. Some people think, weakly, that "death is the only reality in life; happier are those who see and feel that life is the true reality in death." Why then, call it death? And why mourn and weep for those who return to the springtime of existence? Why complain that we ourselves seem to be so soon taken from this land of tombs and replaced in the golden country of our pristine hopes and imaginings?

[Written for the MEDICAL BRIEF.]

A Fad of the Fakirs.

BY B. B. USSHER, M. D.,
Dedham, Mass.

The anguish of humanity has expressed itself more frequently over the loved one affected by tuberculosis, commonly known as consumption, to a greater degree than over any other disease. The agonized father has seen the loved child, just grown into manhood or womanhood, seized in the relentless grip of this disease, and neither prayers nor prescriptions have sufficed to restrain the taking off of the victim. Into every phase of home life this monster evil has stalked and taken whom it would, and at the bottom of it all was the foundation of heredity on which, with dead certainty, it waited for the superstructure of tuberculosis to be meted.

That fad known as the open-air treatment is simply on the basis of cure for consumption, a first-class delusion. In most cases coming under such treatment the patient has, for various reasons, chiefly poverty, been improperly fed and pestilentially housed. I have cases in mind now of persons who went to such a consumption-cure establishment. They were working people, women who were spending their lives indoors in sunless houses and damp basements. They were scantily fed, and that on unwholesome

food snatched as it could be got, and badly prepared. Spare of body, they were fairly bloodless, and in this condition of nervous exhaustion and physical debility, exposure brought to the front consumption, the visit to the sanitarium confirmed the idea that the lungs were tuberculous, and the poor scrofulous invalid was taken in to be done for. Air, rest and food were the three remedies, each and all of which she had been deprived of before going. But, presto, a dozen raw eggs a day, beefsteak that would fatten a lath, air that was as champagne without a vintage, rest unbroken as a child's sleep in its cot, cheerful company, and all the hygienic effects that increase vigor, and fat, rosy and seemingly healthy, with a smile where there used to be a hopeless frown, this seemingly metamorphosed individual is discharged, "cured." Cases of debility have been known to have come back well and strong and under the new treatment these have fairly held their own and kept strong under a new regime, but in these cases there was no tubercle present, there had never been, they were convenient for advertising purposes, but in the cases where there were really consumption established those interested were not informed that when the old life was resumed with its hard work, bad air and poor food, the flesh vanished and the tubercular symptoms resumed sway, and the galley slave of poverty and privation went to the grave at a quick march, clad in all the physical livery that that despot, tuberculosis, compelled them to wear.

The microbe theory has run mad as a factor in diagnosis, and the owlest amongst the would-be scientifics gave us, who can not live with a microscope to our eye, a lot of solemn bosh when they tack it on to the affliction known as consumption. The way to cure consumption is to commence with the parents of the unborn and teach them how to raise strong, healthy children, even in poor environment, and none other should be raised. Not until we kill out the absurdity of breeding children of parents that, were they cattle, we would not dream of reproducing their worthlessness, will we stamp out a disease that is simply an effect from an hereditary cause. It is amusing, were it not saddening, to hear of physicians telling patients that they have examined their blood and sputum and both were full of "bugs," and after awhile, under a religious following out of their treatment, they declare, "not a bug to be seen," but the poor patient, in spite of the exodus of "bugs," still feels badly and, finally, succumbs, but, of course, it was not tuberculosis that was cured. Alas for the deceived ones, they do not feel any better for the use of a new nomenclature, with a wise look they only know the best they could do was done.

[Written for the MEDICAL BRIEF.]

Vaccination.

BY J. CRESSWELL LEWIS, A. M., M. D.,
Benicia, California.

Much is being written *pro et contra* on the subject of vaccination, champions and foes of the practice being equally alert to make the theme look well from their respective standpoints.

There is no doubt that since vaccination has been so extensively practiced, variola has not been so prevalent. Of course, sanitation and isolation of patients have had a great influence in preventing the occurrence of epidemics; and we must remember, too, that diseases run in cycles, appear and disappear, run rampant for a time, and then leave the stage of action, and go to the mysterious sphere of the unknown.

As to the ultimate cause of diseases, as well as to their prevention, medical science is in doubt and ignorance, notwithstanding the great array of literature on these topics, which, with its prolixity and controversial character, perplexes and confuses the reader.

The purpose of the present paper is not to denounce vaccination, for the writer is studying the subject from the point of view of an unbiased observer, and has not arrived at the position where he would absolutely reject it; although, if there were not good reasons to believe that much carelessness has been exercised in the cases observed by him where bad results followed, he would surely be in active opposition to it.

He is not willing, either, to admit that there is no good substitute for vaccination. Men of undoubted ability and unquestioned integrity, claim to prevent small-pox by administering drugs, although the testimony is not yet sufficient to warrant him in discontinuing the practice.

The knowledge that, in his early practice, many were seemingly protected from variola by vaccination at his hands, and through the efforts of his father, has held him until now in the ranks of those who perform vaccination.

To be sure, in those days, humanized virus was used, and virus that we could depend upon, being taken from primary vaccinations of infants three months of age, whose family history on both sides was well known to us, the original stock being taken from the cow, many years before.

The general opinion now is that bovine virus is preferable, and the younger practitioners know nothing else, but with the same care used now as formerly the results have not been as satisfactory to the writer since the bovine virus has been exclusively used.

Passing over the many phases of the subject, which are interesting as well as important, we will confine ourselves to the consideration of the proper methods of performing vaccination and the after treatment.

Vaccination is not as popular among the people as it was forty years ago, as is evidenced by the compulsory laws that have been passed in later years. The great number of bad results that have followed it has caused such a commotion among the laity as to endanger the continued existence of the practice.

Some of these mishaps were unavoidable, we admit, and occurred in the hands of eminently successful and careful vaccinators, but many of them were the results of gross carelessness or ignorance, either of which is reprehensible.

It should be unnecessary to make any allusion to the simple operation of vaccination, but in view of the untoward results many times following its performance, and the adverse attitude of a large portion of the community, as well as of a respectable minority of the medical profession towards it, we are convinced that we are not guilty of supererogation at this time.

If, in the state of uncertainty many find themselves, in spite of statistics in its favor and of laws making it compulsory, the greatest good is to be accomplished through it, there must be exceedingly great care taken in every vaccination performed by medical men.

The age most suitable for primary vaccination is three months, because then there are not the objections to it, as later on, when the child is teething, and also because many cases of variola occur in the first year of life.

When there is small-pox in the family, or when, as sometimes happens, the mother has the disease at the time of accouchement, the child should be vaccinated immediately after birth.

In such a case, if the stage of areola arrives before the disease breaks out, the child is considered to be protected.

The vaccination should be done only when the subject is in good health, except in case of epidemic, when the risk must be taken.

The child must be free from any acute disease or from any chronic ailment known to be inimical to the ordinary course of the vaccine vesicle, such as cutaneous diseases. Even a history of hereditary tendency to disease must be considered, and the child be under observation and treatment for a time, to place the system in the best possible condition.

All these things being duly considered, and the child being thought a fit subject for the procedure, it should be done at once.

The best preparation of the parts, from the experience of expert vaccinators, is to wash them well with soap and water.

The application of alcohol, as is often recommended, appears to modify the action of the vaccine virus, and often prevents a successful result.

The purity of the virus, a matter of grave importance to the subject of vaccination and the family, we can vouch for only in so far as to the general character for reliability that the maker of it possesses. This the writer is always careful to impress on those vaccinated by him, or their parents or guardians, in case they

are young children. This relieves him of responsibility in case untoward results follow careful work on his part. Being able to refer to the maker of the virus and the date when it was issued is of great value in case trouble arises, as it does more frequently than in years gone by.

All good vaccinators of thirty or forty years ago knew that lymph directly from the cow had a more violent effect than that which had been transmitted through the human subject, producing sometimes a vesicular or papular eruption, called by the Germans nachpocken. This, at times, produced urgent symptoms, endangering life.

There are different modes of vaccinating. The method most in vogue is for the physician firmly to grasp the left arm of the child with his left hand, and with the thumb lance (made thoroughly antiseptic), or with the ivory point, on which the lymph is placed by the manufacturer, scratch the arm without drawing blood, and then, moistening the lymph on the point, rub it in well.

The lymph is also furnished in hermetically-sealed tubes, and can be applied after the scarification is completed, instead of using the ivory point.

Some prefer to scrape the selected spot with the lance until it is denuded, when they apply the lymph as before.

Puncturing at an angle of forty-five degrees to the skin has been selected by some, who claim this to be effective in producing satisfactory results.

The slight bleeding ensuing does not prevent a take, they claim, as the valvular character of the puncture in which the lymph is placed insures its retention.

This the writer has never done, but he knows an insufficient scarification is sometimes the cause of failure.

An important step in the procedure is to keep the child under our eye until the arm has thoroughly dried. Many cases of failure can be attributed to carelessness in this respect, as the parent or nurse will often allow the arm to be rubbed and thus spoil our work.

Having dried completely, the arm should be protected by a shield of our own contriving, or what is better, one of the various sorts we can now procure at a nominal cost.

Some claim that four or five vesicles should be produced to insure protection. Such, in our experience of over thirty years, is unnecessary, and inflicts more pain and inconvenience than is warranted.

Sometimes, in spite of all our care, the arm does not take, and we must repeat the operation. We have been compelled, in some instances, to do so even three times before we have had success. Some we have vaccinated that would not take at all.

The patient should be seen after vaccination and watched during the progress of the case. On or about the third day after vaccination a small papule is observed, which by the fifth or sixth day becomes a well-defined vesicle, with an elevated edge and a cup-like depression.

By the eighth day this is perfectly developed, is pearl colored, and the elevated edges and depressed center have reached their acme, while surrounding it is the classic areola.

The child will frequently be feverish, restless, have nausea and diarrhea, and perhaps, induration and enlargement of the axillary glands.

By the fourteenth or fifteenth day a brown, hard crust is formed, which falls off from the twentieth to the twenty-fifth day, leaving a cicatrix that is characteristic, being foveated, depressed and sometimes radiating.

In some cases we have an eruption, appearing at about the tenth day, which may be either vesicular or papular. This is generally of short duration, but may be protracted and prove serious.

Having taken all the precautions possible, the practitioner can not be charged with carelessness if bad results follow vaccination. He has done his duty, has conformed with the laws that are on the statute book, and has been obedient to that higher law of public opinion that demands his service.

For, uncertain as he may be as to the efficacy of the practice, he is warranted in doing as he does, while thousands of his brother physicians believe firmly in it, and are strong enough, numerically, to control the public mind.

A few months ago a young lady was placed under the care of the writer, who has suffered terribly as a result of vac-

cination, a primary vaccination in fact, who thus illustrates, in her person, the disastrous effects that attend on it at times.

A few days after having been vaccinated by a physician in San Francisco, in March, 1906, she developed symptoms that were serious, and, as far as the writer can judge from her subsequent description, were those of septic poisoning.

For three weeks she was quite ill and yet was assured by her medical adviser that hers was an ordinary case and was pursuing a natural course.

When able to get around, she presented herself at the writer's office in San Francisco. This was before the earthquake and fire of last April, which made great changes in the personnel of the profession in that city. She was then weak and anemic, had a large, ugly sore on the arm that had been vaccinated, which eventually sloughed and left a deep, penetrating ulcer, which healed slowly.

The day of terrors, April 18th, came and swept away a large portion of San Francisco, one of the most beautiful and delightful places of abode on the globe. The writer drifted with the great mass of those who were burned out, to Oakland, and, in two months' time settled down in Benicia, the one-time capital of California. His patient had lost sight of him, but when she found where he was, communicated with him and eventually came to see him October 13, 1906.

Her left arm was much smaller than the right, the circumference over the biceps showing a difference of an inch and a half in favor of the right arm. She had pain and weakness in the left arm, tingling sensation in the same, wrist drop, pain in precordium, palpitation and attacks of syncope. Her condition was grave. Before the time of her vaccination she was in good health. She remained so as to be under the writer's care. She was given general and local galvanization in the morning and local faradization in the evening, together with remedies indicated from time to time.

Gradually, she improved under the treatment instituted, until, about December 1st, she was able to discontinue treatment.

This case is noted as one that illustrates the dangers attending vaccination, and whether the physician was careless or not, in his operation, the fact remains that the subject of it suffered as a result of it, and suffered further as a result of his negligence or ignorance in assuring her that hers was an ordinary and natural case, and neglecting to give the necessary treatment.

As such cases come under our notice, from time to time, it should stimulate us to study well every such case, in order that we may arrive at a definite opinion as to the proper status to be given the operation of vaccination.

If all would honestly and persistently investigate, instead of taking everything for granted, medicine would advance more rapidly and mankind would be proportionately blessed.

[Written for the MEDICAL BRIEF.]

Examination Questions Nebraska State Board of Health, May 29-31, 1906.

ANATOMY.

1. Briefly describe the animal cell and the reproductive cell.
2. Name contents of the mediastinum.
3. Describe the occipital bone, naming articulations.
4. Describe the pleural membranes, and name arteries and nerves.
5. Give origin and distribution of the fifth pair of cranial nerves.
6. Give origin and insertion of the flexor muscles of the thigh.
7. Give origin and distribution of the sciatic nerve.
8. Describe the orifices of the diaphragm, naming structures that pass through each.
9. Locate the arch of the aorta, and name its branches.
10. Describe the prostate gland.

PHYSIOLOGY.

1. Describe the red blood corpuscles as to (a) origin and fate; (b) form; (c) size; (d) number; (e) function.
2. What is understood by endocardiac pressure? State the causes of the pressure in the arteries, capillaries, and veins.
3. Give the accepted theory regarding the mechanism of the secretion of urine.
4. Give the successive steps in the digestion of a meal of roast beef and potatoes.
5. Describe the temporary and permanent teeth, and the usual age for the eruption of each.
6. Describe the normal sounds of the heart, and state how they are produced, and where they can be most distinctly heard.

7. Describe the bile and its uses. Give test for bile.

8. Name one property common to all blood leucocytes. Give some of their physiological uses.

9. Write briefly on internal secretions.

10. Discriminate between the corpus luteum of pregnancy and the corpus luteum of menstruation.

CHEMISTRY.

1. Define organic chemistry, atom, and element.

2. How modify cow's milk to approximate human milk?

3. Write an equation showing production of H. and laughing gas.

4. Give chemical tests for strychnine and arsenic.

5. Define fermentation and putrefaction.

6. Describe accurately Heller's test for albumen.

7. What reaction, normal or abnormal, may be produced by that test?

8. What average amount of solids in urine, and how estimated?

9. What are the common determinations in chemical examination of gastric juice?

10. What is the composition of proteids?

SURGERY.

1. Name the most common curvatures of the spine; give etiology, symptoms, treatment of lordosis.

2. Give etiology, symptoms and treatment of empyema; give diagnosis of empyema, hemothorax and bronchiectasis.

3. What is a ranula? Treatment,

4. Give differential diagnosis of the following conditions: Intussusception, floating kidney, stricture of pylorus, bubonocele, varicocele, and undescended testicle. Describe fully the technique of operation for varicocele.

6. How would you treat a lacerated and contused wound of the hand?

7. Etiology, symptoms, clinical history of carcinoma of breast. Describe in detail operation.

8. Give technique of amputation through middle third of the thigh.

9. What is the significance of pain in the abdominal region?

10. Describe in detail two of the most common varieties of clubfoot, and give surgical treatment of each.

OBSTETRICS AND GYNECOLOGY.

1. Describe the human embryo at the second, fifth, seventh and ninth months, giving size and weight.

2. Describe the symptoms, and give the management of an incomplete abortion.

3. Describe a case of phlegmasia alba dolens, giving diagnosis, time of occurrence, cause, termination, and treatment.

4. Differentiate ovarian cyst, ascites, and pregnancy at beginning of fifth month.

5. Describe a case of puerperal fever, giving cause, time of invasion, symptoms and course.

6. Name and describe fully the contents of the uterus at full term, before labor begins, detailing the presentation and position of the child most frequent, in an uncomplicated, healthy case.

7. Enumerate the symptoms which indicate the death of the child *in utero*, and state what course should be pursued in such a condition.

8. Describe in detail operation for repair of (a) lacerated cervix, (b) complete laceration of perineum.

9. Give in detail the anatomy and physiology of the pelvic floor.

10. Name the different varieties of metritis; give causes, possible sequelæ, and treatment.

PATHOLOGY.

1. What is pathology?

2. Describe embolism and thrombosis.

3. Define and describe phagocytosis.

4. What is a neoplasm? Give some examples.

5. Describe sarcoma, fibroma, lipoma, myxoma, osteoma, and glioma.

6. Describe a primary and a secondary anemia, and give examples.

7. Describe pernicious anemia, chlorosis, leukemia.

8. Describe phlebitis, varieties, common causes, and course.

9. Describe and differentiate between gastritis, ulceration of the stomach, and cancer of the stomach.

10. Differentiate between arthritis deformans and acute polyarthritis.

PRACTICE.

1. Give symptoms of myxœdema. Give treatment.

2. Name the acute infectious exanthemata, giving period of incubation and specific bacterium of each.

3. Give diagnosis and treatment of acute eczema of the face in an infant.

4. Describe in detail the most common method used in the examination of stomachic conditions. Give diagnostic value of absence or presence of acids and juices, and significance of conditions found present.

5. Describe diagnostic significance of hematuria. Give etiological factors. How would you differentiate whether the kidneys or bladder were affected?

6. Give differential diagnosis of interstitial and parenchymatous nephritis. Give pathology of both diseases.

7. Give diagnosis, prognosis, and treatment of chronic pulmonary emphysema.

8. Give causes, diagnosis, and treatment of chorea.

9. Explain the diagnostic significance of the "knee jerk."

10. Give the abnormal heart sounds, and the point of greatest intensity of each.

Book Notices.

CHRIST AMONG THE CATTLE. A Sermon Preached in The First Congregational Church, Portland, Oregon. By Frederic Rowland Marvin. Fourth Edition. Revised and Corrected. Troy, N. Y.: Pafraets Book Company.

Nothing can be said more wisely, nor expressively, in regard to this work than the expressions of John G. Whittier: "I have read the excellent sermon by Frederic R. Marvin, with hearty approval. The sooner we recognize the fact that the mercy of the All-Merciful extends to every creature endowed with life, the better will it be for us as men and Christians. I hope the sermon will have a wide circulation, and teach its readers that the dear Christ is 'among the cattle,' as well as among their owners." In contradistinction to this is Mr. Rickaby's "Moral Philosophy," a text-book used in many Roman Catholic educational institutions, but not indorsed by many Roman Catholic writers. Mr. Rickaby says, concerning the rights of animals: "But there is no shadow of evil resting on the practice of causing pain to brutes in sport, where the pain is not the sport itself, but the incidental concomitant of it. Much more in all that conduces to the sustenance of man may we give pain to brutes, as also in the pursuit of science. Nor are we bound to any anxious care to make this pain as little as may be. Brutes are *things* in our regard." This sermon is a grand one and should be liberally read by all classes.

THE TRAGEDY OF BADEN. By Cary H. Wilkinson. New York and Washington: The Neale Publishing Co.

This is a story where the pictures of life are graphically and truthfully drawn, and the characters delineated with more than ordinary skill. A subject of life pictures that are, no doubt, based on facts that infuse habits of caution to those who have the will power to resist in times of temptation. The author is a most delightful and truthful writer, and the words, thoughts and utterances touch the true emotions of pure and good minds. A story of a beautiful girl, an orphan, placed in an orphanage, gets into the clutches of a villainous saloon man, and is held captive two years, then rescued—a pure girl—by a drummer for a New England coffee house, who was doped and left for dead, when his resurrection by the medical students is shown to be weird, spectacular, and dramatic. It is fascinating from start to finish, and is the work of a well-known resident of Galveston, Tex. Send to the publishers for a copy.

DISEASES OF THE DIGESTIVE SYSTEM. Edited by Frank Billings, M. D., Professor of Medicine, University of Chicago, and Professor of Medicine and Dean of Faculty, Rush Medical College. An Authorized Translation from "Die Deutsche Klinik." Under the General Editorial Supervision of Julius L. Salinger, M. D. With Forty-five Illustrations in the Text. New York and London: D. Appleton & Company.

The absolute knowledge in regard to diseases of the digestive tract courts the attention of all physicians, because of the past theoretical knowledge on the subject. And any work that has a practical knowledge of the subject should be considered. This work has the expressions of the most eminent men of Europe, such as Rosenheim, Fleiner, Leo, Strauss, Reigel, Ewald, Boas, Hirschfeld, Oser, Minkowski, Stadelmann, Krauss, Neusser, Vierordt, Strasburger, Hoppe-Seyler, and Nothnagel. The subjects are treated very fully and at the same time in a concise and practical manner. The diagnosis of the various diseases is fully discussed, and the treatment, including the dietary, is satisfactorily full and complete.

SUPPLEMENTARY ESSAYS ON THE CAUSE AND PREVENTION OF DENTAL CARIES. By J. Sim Wallace, M. D., D. Sc., L. D. S., Hon. Dental Surgeon, West End Hospital for Nervous Diseases, and Assistant Dental Surgeon, National Dental Hospital, W. London, Eng.: Baillière, Tindall & Cox. Price, 75 cents.

The essays included in this volume appeared originally in the "Transactions of the Students' Society of the National Dental Hospital," the *Dental Record*, and the *British Dental Journal*, and are intended as a fitting supplement to the author's work on the "Cause and Prevention of Decay of Teeth," the price of which is (in America) $1.50. If you are interested in this subject it would be well to secure these volumes.

A COMPEND OF OPERATIVE GYNECOLOGY. Based on Lectures in the Course of Operative Gynecology on the Cadaver at the New York Post-Graduate Medical School and Hospital. Delivered by William Seaman Bainbridge, M. D., Adjunct Professor of Operative Gynecology on the Cadaver, New York Post-Graduate Medical School and Hospital; Consulting Gynecologist, St. Mary's Hospital, Jamaica, L. I.; Consulting Gynecologist to St. Andrew's Convalescent Hospital, New York, etc. Compiled, with Additional Notes, in Collaboration with Harold D. Meeker, M. D., Instructor in Operative Gynecology on the Cadaver, New York Post-Graduate Medical School and Hospital; Assistant, Department of Gynecology, Vanderbilt Clinic, College of Physicians and Surgeons, New York. New York: The Grafton Press, Publishers. Price, $1.00.

While this work is primarily intended for the post-graduate student, there is enough of good material for the general practitioner who desires to do abdominal surgery, and he will find in the chapter on "Miscellaneous Points" many suggestions of a practical nature. It is a book that can be recommended to the student and practitioner.

A COMPEND OF MATERIA MEDICA, THERAPEUTICS AND PRESCRIPTION WRITING. With Especial Reference to the Physiological Action of Drugs, Based on the Eighth Revision of the U. S. Pharmacopeia. Including also many Unofficial Remedies. By Samuel O. L. Potter, M. D., M. R. C. P., London. Seventh edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co. Price, $1.00.

This is one of Blakiston's Quiz Compends, a series of Quiz works that have stood the test of years and are now more popular than ever.

THE PRACTICAL MEDICINE SERIES. Comprising ten volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. IV.—Gynecology. Edited by Emilius C. Dudley, A. M., M. D., Professor of Gynecology, Northwestern Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago, and C. von Bachellé, M. S., M. D., Gynecologist to the German Hospital, Chicago. Vol. V.—Obstetrics. Edited by Joseph B. De Lee, A. M., M. D., Professor of Obstetrics, Northwestern University Medical School. With the collaboration of D. Roehler, M. D., and Herbert M. Stone, M. D. Chicago: The Year Book Publishers. Price, $1.25 per volume.

Every student of medicine will find his work made lighter and more satisfactory by reading the volumes of this series in medicine, and he will get a good habit by frequently referring to them. They are of a size to be convenient and handy, and can be carried with him. Have you ever seen a copy? If not, get one and be convinced.

A TEXT-BOOK OF SANITARY AND APPLIED CHEMISTRY, or The Chemistry of Water, Air and Food. By E. H. S. Bailey, Ph. D., Professor of Chemistry, University of Kansas. New York: The Macmillan Company. Price, $1.40.

This book is primarily good for all students of chemistry and especially those who have only had a rudimentary high-school knowledge of the subject, yet it is also a text-book in its entirety, owing to the vast amount of information on its pages. It gives some simple rules, yet the full text is complete on the subject of chemistry, and will be an absolute guide on the subject. If you want to study chemistry from the foundation up to all its intricacies, secure this work and lay the foundation for success.

THE MEDICAL STUDENT'S MANUAL OF CHEMISTRY. By R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics, and Toxicology in Cornell University. Sixth Edition. New York: William Wood & Company. Price, $4.00.

Think of it, if you want a work on chemistry, that this is the sixth edition of a book that has stood the test for accuracy. Could you be induced to look further, when you are told that this work has been revised to date?

THE INFLUENCE OF THE MIND ON THE BODY. By Doctor Paul Dubois, Professor in the University of Berne, Author of "The Psychic Treatment of Nervous Diseases." Translated from the Fifth French Edition by L. B. Gallatin. New York and London: Funk & Wagnalls. Price, 50 cents.

Dr. Dubois has a well-earned reputation as a specialist in the treatment of nervous disorders through psychic suggestion, and whatever he writes upon the subject will be read with interest. It will do good to all who read this work.

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Editorial.

National Taxes Too Great Already.

The message of President Roosevelt, at the opening of Congress last December, contained a greater number of radical recommendations than were ever bunched together in a presidential message before.

Some of them were decidedly revolutionary, and most of them were impractical and visionary, and yet they were delivered with as much *sang froid* as was his attempt, a short time previously, by imperial edict, to change the orthography of the language.

Among the many new measures which the President urged upon Congress was an inheritance and an income tax.

Now what the President wants to increase the tax burdens of the people at this time for, we are at a loss to know. In spite of the recent enormous increase in the Government's expenses, there will be a surplus in the Treasury at the end of the present fiscal year, according to Secretary of the Treasury Shaw, of $58,000,000.

This estimate is likely to prove too low rather than too high, as the Government receipts since the estimate was made clearly indicate.

The President does not specify the rate at which he wants incomes and inheritances taxed, and so it can not be known how much money he wants from these sources. However, the yield from the income tax alone in the last year of its existence in this country (1865-6) was $72,000,000.

Practically no part of this large amount was derived from the Southern States, and it was collected at a time when the resources of the country had been drained by four years of the most expensive war in history.

If an income tax, at the same rate as the last, were levied now, it would proba-

bly produce something like $1,000,000,000. There are no figures at hand upon which to base a calculation as to the probable amount an inheritance tax would yield, but it would amount to a huge sum.

But let us say that the two proposed taxes would, together, produce $1,000,000,000, and we do not think the estimate excessive. What use is there for all this money? There is a big surplus on hand under present taxes. Then why take more? Would it not have to be spent? And for what purpose? It would serve only as a temptation for extravagance and corruption, and, by withdrawing so much money from legitimate channels, it would almost certainly precipitate a panic.

There would be some excuse for the President to propose new tax measures if he had suggested a reduction in the internal revenue or the tariff taxes. But there is not a word in his message indicating any such desire. He wants more money and a lot of it, and that is all there is to it. Or was his purpose only to cater to the ne'er-do-wells by this threat to tax thrift and enterprise?

There never was a greater truth uttered than when Grover Cleveland said, "Unnecessary taxation is unjust taxation. Unjust taxation is robbery."

The Government has a right to demand from its citizens sufficient funds for an economical administration of the Government, but every cent which is taken beyond this amount is robbery. The people are already paying about eight hundred millions a year for the support of the National Government. Will they submit to still greater exactions? We do not think so.

"Shorts."

Short sheets, short blankets, short mattresses and short bedsteads are said to do more harm to hotels and railroads than all other causes combined. Doctors complain that at some hotels they can not make their patients comfortable. When they pull the covers over their shoulders it comes off their feet, and *vice versa*.

This state of affairs is probably harder on commercial travelers than any other class of men. It is getting so that only very short men can be commercial travelers. Hotels that treat their guests O. K. in this respect should advertise the fact, so that traveling people can know where to stop. Doctors should use their influence with hotel proprietors to have this nuisance stopped. This short nuisance is creeping in the underwear department.

Hand Railing.

Architects and builders should provide a hand-railing to all steps, whether in or out of doors, for the benefit of old people and invalids.

Physicians are now using their influence with architects to make some progress in this direction.

Suffering humanity is depending on doctors to get for them the ordinary comforts of life.

The Disadvantages of a German Education for the American Medical Practitioner.

The BRIEF has, on numerous occasions, pointed out the fact that it was time and money wasted for American physicians or students to go to Germany to complete their medical education. We are not sure that it is necessary to go to any foreign country for this purpose, but we have urged that if our physicians want to go abroad at all, they had better go to England, where the standard of the profession, and the advantages afforded are quite equal to those in Germany, to say nothing of the very important fact that it is almost out of the question for one who has not a thorough acquaintance with the German language and German methods of thought, to get very much benefit from attending German colleges or clinics. We are, therefore, glad to see other medical journals taking this view, and we print the following article on the subject from the *Interstate Medical Journal:*

So much has been written on the advantages of a German education for the American physician that he who would take a stand against the wave of enthusiasm must needs be a brave, not to say a foolish, man to stir up a hornet's nest.

Enthusiasm is not to be undervalued when it is the resultant of a thorough and wise interpretation of a human act or of another

spoke in the wheel of progress for the improvement of the human intellect, but when it is a mere bubble, kept on high by the vaporings of chuckle-headed individuals, it is time to prick it in the hope that by doing so the purblind may be brought to their senses, and the small voice of the few medical non-conformists may be heard.

The raw product that comes to our medical colleges makes strenuous efforts to over-educate itself in four years, and then, like any other superior person, flies to Europe for another addition to the indigesta that are a weariness to his mind and body. Needless to say, he returns with a smattering of German, such as *Das Mann* and *Der Frau*, and a complete knowledge of surgery, garnered in three or four months by gazing through magnificent distances at an operating table (the subject is never seen) over the heads of hundreds of other students, and a dozen or so assistants, who completely obstruct the view. Not only does his brief sojourn in Germany yield him little profit, but the many new and startling innovations outside the medical clinics, obfuscate his brain, so that commiseration, instead of blame, should be his due.

The German-American physician, on the other hand, is in a state of preparedness to profit by contact with new conditions. His knowledge of the language, his idealism more German than American, his point of view, which makes him appreciative and discriminative at once when on German soil, yield him advantages over the non-linguistic American too numerous to mention. But he who is handicapped by knowing but one language, and has merely read of Germany in books, whose very essence is garbled, can not expect an immediate adjustment of German conditions; in fact, a full month elapses before he feels himself orientated. As for the remaining three months which he wishes to devote to clinical observations, the lack of varied and complete cosmopolitanism makes him a mere "looker-on in Vienna," instead of a student profiting by working in the midst of things.

This is no disparagement of German medical knowledge, but a criticism of a large number of American physicians who, upon their return home, express great dissatisfaction with their work whilst in Germany, when the truth of the matter is that their minds, steeped in American thought and American social conditions, are not receptive enough to grasp, in a short space of time, the fruits of German medical science. For these men, and they are the element that shall make us proud of medical progress at home, the medical schools at Boston, Philadelphia and Baltimore at present are second to none, both for clinical material and laboratory investigation. By going there their education may, eventually, take upon itself that better phase, derided as culture, but so much better than over-education, which spells to-day nothing but a pinch of German, a little Latin and less Greek, with which to bamboozle the public.

Fads and fancies have always been our besetting sin, and no greater sin against advancement of true American medical knowledge has ever been committed in this country than the foolish attempts of wild-eyed enthusiasts of German universities to ruthlessly tear from the brow of American culture the few bay leaves we suffer her to wear.

[Written for the MEDICAL BRIEF.]

Prevention of Chronic Suppuration of Middle-Ear.

BY H. H. LOOK, M. D.,

Instructor of Ophthalmology in the Medical Department of the University of Kansas; Ophthalmologist of the K. C. Southern Ry., St. Joseph's Hospital, Etc. Kansas City, Mo.

The number of chronic suppurative middle-ear diseases that have come under my observation in the last six months prompts me to write a brief article for the purpose of calling attention to this evil, and urging more careful consideration of the unfortunates afflicted with this disease.

By chronic suppurative disease, I mean a condition that has persisted in spite of treatment or through neglect for at least three months. Statistics of mortality in infants show that eighty per cent gave evidence of purulent inflammation of the middle ear. How often have we been called to the bedside of infants suffering with gastric disturbance, rise of temperature and restlessness and failed to discover the real cause until it is revealed by discharge or some complication.

Of acquired deafness, statistics show that twenty-five per cent are due to eruptive diseases, of which scarlatina and measles play an important role. This shows the necessity of inspecting the ears at each visit when treating these diseases.

The laity, generally, have the impression that a discharging ear is a trivial matter and will heal of itself, but this is true of only a limited number of cases, and it devolves upon the family physician to warn them of the danger.

The tympanic cavity is the seat of trouble in about seventy-five per cent of all ear diseases. Though it is deeply seated and, apparently, well protected, this cavity may become infected by way of the external canal, though eighty per cent of

middle-ear disease is due to the infection from the naso-pharynx, through the eustachian tube. Knowing that the naso-pharynx is constantly inhabited by pathogenic germs, and that it is the most frequent seat of trouble, any condition that may excite inflammation or have a tendency to prolong, must be removed. The removal of irregularities of the septum, spurs, enlarged turbinates, are of great importance. In one-sided nasal stenosis, the ear of the same side is usually affected. Faucial tonsils, when chronically enlarged, are an indirect cause of middle-ear disease, and should be removed.

Enlarged pharyngeal tonsils, or adenoids, when present, are a constant menace to the ear. Not only is the ear subjected to danger, but it produces malformation of the nose, throat and chest. Where these growths are large enough to interfere with normal ventilation and nutrition of the ear, or produce obstruction of the air passages, they must be removed. The danger to the middle ear is much greater when the naso-pharyngeal inflammation is due to some general disease, as scarlatina, measles, diphtheria, and especially influenza, than an inflammation purely localized in the throat and nose.

The external causes may be due to disease of the auricle and, as the external canal is also inhabited by pathogenic organisms, any injury caused by cleansing the canal with ear spoons, etc., may infect the middle ear.

Catching cold, no doubt, is an important factor in causing middle ear disease, though I do not believe that it will produce ear trouble without the co-existence of one or more of the above conditions.

Treatment.—It is my opinion that seventy-five per cent of the cases of chronic suppuration could be prevented by instituting proper and efficient measures in the acute forms. As the acute suppurative otitis frequently follows the non-suppurative variety, and as a differential diagnosis is difficult without a perforation of the tympanic membrane in the more severe forms of the non-suppurative, I will consider the two diseases as one, under the headings of the non-perforative and perforative varieties, regardless of the character of the fluid in the tympanic cavity, so as to conform with the general treatment outlined below.

Non-Perforative Variety.—Where there is a slight bulging of the drum, and if pain is not severe, our object is to bring about resolution of the exudate and avoid perforation. The treatment consists (having previously sprayed the nose and throat) in inflating the middle ear by means of the Politzer bag, for the purpose of removing the fluid in the middle ear, restoring the drum to its normal position and prevent adhesions by massage. If pain is present, a few drops of ten per cent carbolated glycerine instilled into the external canal will give relief; it is an antiseptic, anesthetic, etc. Heat is also used in various forms.

The general health should receive attention. If the symptoms do not improve under this treatment in two or three days, incision of the tympanic membrane is indicated.

Perforative.—Where there is marked bulging of the drum and intense pain, whether the fluid in the tympanic cavity be non-purulent or purulent, our object is to facilitate the discharge and prevent mastoid and intracranial complication by doing a paracentesis. We not only lessen the danger of chronic suppuration, but shorten the disease by one, two or three weeks, and hearing is restored to its normal condition. Free drainage and strict antiseptic precautions constitute the most salient factors in the successful treatment of acute ear disease.

After paracentesis, treatment consists of cleansing the canal by mopping it with cotton. Sterilized gauze is packed in the canal, and an external pad applied to the ear.

The discharge in acute troubles may be profuse, but in chronic suppurative otitis media it is scanty, very rarely profuse and may have an offensive odor. The degree of impairment of hearing depends largely upon the destruction brought about by the acute stage, from a slight impairment to a complete loss of hearing.

Altman Building.

I enclose two dollars to extend my subscription for two years. When I have the BRIEF in my office I have a friend when in need.—J. D. PICKENS, M. D., Whitt, Tex.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
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[Written for the MEDICAL BRIEF.]

Some Indications for Bleeding.

BY S. HERBERT PERRY, M. D., M. R. C. P.,
Assistant Physician to the General Hospital and Physician to the Out-Patients' Children's Hospital.
Birmingham, England.

Venesection, like leeching and cupping, have, during the past quarter of a century, passed somewhat out of fashion. In times gone by bleeding was apt to be employed inopportunely, to be misdirected, and to be pushed beyond its proper and safe limits; of late, medical practice has rushed to the other extreme.

Our lay friends never tire of telling us that medical opinion is a mere change of fashion, and we can hardly deny that we have, to some extent, laid ourselves open to this statement in the matter of venesection. For the custom of blood-letting has passed, during this century, through two stages, those of over use and of no use, and is now passing into a third, and, I hope, last stage, that of rational and moderate use.

Yet the question of the therapeutic value of venesection receives but scant notice at the hands of writers of text-books on medicine and therapeutics. It is one of the "debatable grounds" of medicine, and, for the most part, it appears to be thought best that the medical student should leave the matter alone. I can not agree with this attitude, since I hold that venesection, properly used, is a most valuable therapeutic agent. I have, in my own mind, almost a fear that in these days of scientific medicine there is a tendency to neglect the most obvious field that lies before us, that of clinical experience. Pathological and physiological theories rise and fade before us with a bewildering rapidity, resembling a show of fireworks. Clinical research is more concrete, and deals with facts rather than theories; and we must remember that however skilled a man may be in the laboratory, it is by his clinical knowledge that he must stand or fall in actual practice.

A word upon the method of venesection. The older surgeons appear to have advised the opening of a vein by one incision. This method has, to my mind, certain disadvantages. In making one direct incision into the vein one of two things may happen—the vein may be completely divided, or may be imperfectly incised, and, in the latter case, thrombosis will rapidly occur at the incised point, and another vein may need to be opened. This I have seen to happen on several occasions in inexperienced hands. My method is as follows: Make an oblique skin incision over the chosen vein, and then—turning the back of the scalpel to the vein—transfix it, thus making sure that it is semi-divided. A moderately tight turn of ban-

dage has, usually, been previously placed centrally, and the skin cleaned.

This method is certainly an improvement on what I may call the scratching method of opening a vein. Our professional forefathers, also, sometimes wounded the brachial artery, or caused a later arterio-venous aneurism by their bolder methods. Ethyl-chloride may be used to produce local anesthesia, but it is not usually advisable in the conditions which demand venesection.

There is a certain practical difficulty in advising a blood-letting. The patient is apt to regard the matter as an affair of much gravity, and his death will assuredly be laid at our door if it follow on closely. With the exit of the frequent blood-letting of years gone by, there has come a general shrinking at the sight of blood. Truly, indeed, one may say with one of the greatest of our romance writers, that our forefathers "took a braver heart to battle than we take—to the dentist."

I now proceed to the basis of my paper. I shall deal only with such indications as I have deduced from my own cases, and shall consider such indications under the heading of the diseases in which they occurred. These diseases are:

1. Acute pneumonia.
2. Cardiac disease.
3. Acute and chronic nephritis.
4. Cerebral hemorrhage.
5. Heat stroke.

It is to be clearly understood that this list is not put forward as a summary of the diseases in which venesection is of value, but is merely a list of those diseases in which I have seen it used with advantage, or otherwise.

Venesection in Acute Pneumonia.—I deal first with this disease because most of my venesections were performed in the course of it, and because I look upon pneumonia as essentially a disease in which life may be saved and distress much relieved by a timely blood-letting. Acute pneumonia is one of the few diseases in which venesection may be used as a curative agent; that is, as an agent that may directly aid in the restoration of normal health to a patient—and not merely as a palliative, as in chronic cardiac disease.

Looking through my series of cases, I find three types of acute pneumonia in which I consider that venesection was used with advantage to the patient.

1. In the early stages of cardiac failure.
2. In pneumonia, complicated by considerable acute bronchitis.
3. In plethoric pneumonia.

With these three types I will deal briefly in turn, taking first the cardiac failure type, as being the most important and including the larger number of cases.

1. In the early stages of cardiac failure.

We may take the following as a sufficient group of signs of cardiac failure in pneumonia:

(*a*) Signs of dilatation of the right ventricle.

(*b*) Increasing dyspnea.

(*c*) Commencing edema at the bases of the lungs.

(*d*) A secondary decrease in the loudness of the second sound in the pulmonary area.

(*e*) Certain alterations in the blood pressure.

The increasing dyspnea, mentioned above, has this point about it, that it becomes distressing to the patient, whereas I do not think that there is usually subjective distress in respiration in a favorable pneumonia case.

To sign (*d*) I am inclined to attach some importance. A secondary decrease of the pulmonary second sound is one of the earliest and most important of the signs of right ventricle failure. In the earlier and favorable stages of an acute pneumonia, the pulmonary second sound is typically accentuated, sharp and clear. Later on, a careful observer may note that the sound becomes dull and muffled, relatively, to its former tone. This change of tone may be associated with commencing resolution, with a decrease of dyspnea, and a general improvement. But, in my experience, the change of tone is most marked when it occurs with increasing dyspnea, growing lividity of the skin, and commencing pulmonary edema.

In the improving case, the alteration in tone coincide with the lowering of the blood pressure in the pulmonary area; in the graver case, the muffled tone of the second sound points to failure of the

heart muscle and dilatation of the right ventricle.

In several cases of cardiac failure in pneumonia I have observed this alteration in the tone of the pulmonary second sound to be one of the earliest—if not actually the earliest—of the signs of cardiac failure. If we allow the right ventricle to dilate to a marked extent, we have reached a most dangerous period. Venesection, to be of a real service, must be performed while the heart has yet a good potential vitality; it will be only a palliative agent if grave cardiac failure has occurred, more especially so if the failure occur early in the disease.

With regard to changes in blood pressure (*e*), I take the typically favorable pulse of acute pneumonia to be a full and fairly soft one. Pneumonia has a frequent, large, vehement pulse, with well-marked dicrotism.

In an unfavorable pneumonia, we may get some variety of pulse; I may mention two well-recognized forms. A failing heart may coincide with a high blood pressure, where the high blood pressure is probably a chief factor in the failure; or, where the heart muscle has weakened primarily from other causes, as excessive toxemia or high temperature, the pulse may be small and feeble. This feeble pulse may also be secondary to the evil effects produced by a high-pressure pulse.

The effect of a free venesection on the different types of pulse, above mentioned, will be obviously different. The high blood pressure pulse is lowered and softened, whereas the small and feeble pulse gains tone and becomes more full as the blood-letting relieves a heart and venous system distended and choked with blood.

2. In pneumonia and acute bronchitis.

I have seen excellent results to follow the practice of venesection in cases of pneumonia early complicated with much bronchitis; the profuse bronchitic expectoration being much relieved. All that has been said with regard to cardiac failure applies to this type also. I am inclined to think, however, that in this class of cases we should bleed early in the disease, in order to relieve the bronchitis, and that we need not wait for signs of cardiac failure, since if these appear they are necessarily of greater gravity than in an uncompleted pneumonia.

I need hardly point out that venesection must always be quite inadvisable in old or debilitated people.

3. In plethoric penumonia.

By the term plethoric pneumonia, I refer to a type of case familiar to all. The patient is a stout and, to the lay mind, a robust man, with high blood pressure, and is generally in much pain and distress. He is typically the subject of full feeding and of over full drinking. He is a bad subject for penumonia, and is, I believe, helped by a free venesection early in the disease, say to sixteen or twenty ounces. I am aware that the treatment may here be termed empirical, and a reversion to the ways of our forefathers. Yet it is better to relieve our patient as an Empiric than to fail as a Rationalist.

Doubtless, in other types of pneumonia, venesection may be indicated. I desire only to draw attention to the forms which I have had an opportunity of observing.

Venesection in Cardiac Disease.—In this matter my experiences are limited to chronic *morbus cordis*, and, speaking generally, I may say that I have not a good opinion of the use of venesection in this condition. When the cardiac muscle is degenerated or diseased, venesection can only be of value as a temporary remedy. The true value of venesection is here absent. I refer to the tiding of an organically healthy heart over an acute emergency, for in such a case lies the real value of blood-letting.

We have all seen a venesection save life, for the time being, where a sudden emergency, such as an unusual strain, has caused failure of degenerate heart muscle; but this blood-letting can do no permanent good. It might, however, and often would, relieve us from the gravity of a sudden and distressing death. The case I have in mind is within the knowledge of all. A patient, having chronic cardiac disease, is brought to us purple with cyanosis, the superficial veins standing out, the respiration much distressed. The exhibition of one of the nitrites will afford relief to such a case, but not so effectively as a blood-letting, for reasons which are obvious and mechanical. The nitrites, by dilating arteries and arteri-

oles, relieve a part only of the peripheral obstruction; they only relieve indirectly the venous system, and still more indirectly the capillary system. In these cases of heart failure we commonly find a choked venous and capillary system, a dilating heart, unable to contract and the peripheral arteries of small volume and ill-filled. By a timely venesection we lessen the the actual amount of blood flowing to the heart, and directly diminish the blood pressure in the local capillary area affected. The heart has, therefore, less blood to deal with, and a clearer path through which to drive it. In this manner an opportunity is afforded to the heart of recovering from temporary strain and of resuming its function. When we consider that the heart is an organ which has no rest, save its own diastole, we may in some way understand how great may be the relief afforded by the abstraction of twenty ounces of the blood in circulation.

To pass from this digression, I suggest that there is in chronic cardiac disease a certain danger of producing or hastening the occurrence of thrombosis by the use of venesection. I have notes of two cases in which thrombosis followed on venesection, at some interval.

Case 1.—Male, aged fifty-nine years; suffering from chronic bronchitis and a right ventricle, much hypertrophied and dilated. On admission he presented great cyanosis and dyspnea and a pulse small and compressible. Great relief was given by the taking of blood—twenty ounces—from the arm. He improved during the following weeks. Six weeks after admission, after a movement implying much greater exertion than usual, the patient fell back in bed with general convulsions, and a sudden and complete loss of consciousness. The heart was now acting strongly, the blood pressure was high and the arteries were markedly degenerated. Thinking that a cerebral hemorrhage was occurring, I bled the patient again at once to sixteen ounces. No relief followed and the patient died five hours after the onset. The *post-mortem* showed a thrombosis of the basilar artery.

Truly, we may learn from our mistakes. The *post-mortem* examinations showed plainly that the treatment was wrong, and, possibly, hastened the end. I do not suppose, however, that a fatal termination could, in any case, have been avoided.

Case 2.—Male, aged twenty-two years, suffering from chronic mitral disease. On admission, he showed cyanosis, dyspnea, and great abdominal pain. The pulse was small, rapid and irregular. Venesection was performed to fourteen ounces, with marked relief to the patient.

He improved for three or four days, and then developed some consolidation at the base of the right lung. A few days later, he was seized with increasing dyspnea and vertigo. On the following day complete right hemiplegia and aphasia were observed, and death followed shortly.

The *post-mortem* examination showed thrombosis of the basilar artery, as in Case 1.

In addition to the interest that lies in the fact that they were both cases of thrombosis of the basilar artery, these cases indicate that there may be a danger in using venesection in cases in which the heart and vessels are too far gone in disease to be able to accommodate themselves to the changes in the circulation brought about by the abstraction of blood.

In a case, for instance, of profuse hemoptysis, we may advise venesection, in order to produce thrombosis at the point of lesion. In a case of chronic cardiac disease, in which the blood is dammed backwards into the venous system, we shall usually tend to fill the systemic arteries by using venesection; but, if the heart be too far degenerated and dilated to react to such treatment, venesection may, possibly, tend to increase the chances of the occurrence of a peripheral thrombosis.

In Case 2, above quoted, the onset of the paralysis was typical enough of thrombosis; but in Case 1 the sudden onset, rapidly complete coma, and previous exertion, led me to diagnose a sudden hemorrhage.

I have notes of another case in which venesection gave temporary relief, but was of no permanent value. The case was one of general arterio-sclerosis, with a much-dilated heart, consecutive to lead poisoning and chronic nephritis. Venesection was tried for the relief of most distressing cardiac dyspnea, and suc-

ceeded so well that it was used on three occasions. Such treatment, however, could have no real curative value, and I should not be prepared to repeat it in a similar case, since the state of the heart and arteries necessarily led to a rapid recurrence of the patient's distress.

Venesection in Cerebral Hemorrhage.—There are three types of cerebral hemorrhage in which blood-letting might be advisable.

1. Ingravescent hemorrhage.
2. A sudden, serious hemorrhage.
3. Threatening recurrent hemorrhage.

I have no experience of venesection for ingravescent hemorrhage, but I should certainly be inclined to advise it should opportunity offer.

I have small doubt that venesection might, in otherwise suitable cases, be valuable at the onset of a sudden cerebral hemorrhage, but, unfortunately, the opportunity of performing it can hardly ever occur.

I have had the opportunity of using venesection in the third type of cerebral hemorrhage mentioned, that in which recurrent hemorrhage threatens. This patient, who was recovering from a primary hemorrhage three months' distant, I bled twice for the prevention of recurrence, on the appearance of such symptoms as vertigo, headache, paresthesia and high blood pressure. I believe that this treatment was of value in prolonging life, but it could not, in the face of highly-degenerated arteries, prevent an ultimate free hemorrhage, which caused sudden death.

Venesection in Nephritis.—The cases of venesection in nephritis, which have come under my notice, fall under the following heads:

1. Simple acute nephritis, with high blood pressure and signs of uremia, occurring in young people.
2. Uremic convulsions, due to chronic nephritis.
3. Chronic uremia, with high blood pressure, due to chronic nephritis.

In the first type quoted, the blood-letting was advised in order to relieve two conditions, the high blood pressure, and the toxemia induced by the disease (that is, assuming that the symptoms of so-called uremia are due to poisonous material circulating in the blood.) In this case the immediate result and the ultimate result were alike excellent, and I shall incline to a repetition of the treatment with the advent of a suitable case.

I have only seen the above case of this type, and I can not speak as to whether the bleeding gained its good result by relieving the blood pressure or the toxemia, or both. The mere relief of a fairly high blood pressure does not seem to account for the great relief of the other dangerous symptoms in such a case. Does venesection relieve an acute septicemia or sapremia, without a high blood pressure, for instance?

I have only one case of uremic convulsions to chronicle, and in this case venesection (twenty ounces) was of no avail. I note, with interest, that in this case the blood pressure was not high, for I am inclined to attribute the whole value of blood-letting to its influence on blood pressure rather than to any possible abstraction of *materies morbi.*

Of chronic uremia, with high blood pressure, I have three cases. In each of these venesection gave an immediately good result, followed by a rapid relapse in a few hours. As I stated above, venesection can not be expected to give any permanent results in cases where the heart and vessels are seriously degenerated. The circulatory system must retain the power of recovery if it would benefit by the short rest and the chance of regaining its equilibrium, conferred by venesection.

Venesection in Heart Stroke.—One case only, in which venesection was used, has come under my notice. The case was one of true insolation, occurring on a steamship in the Indian Ocean, not a case of mere heat exhaustion, such as we may see fairly often in the summer. The onset occurred while the man, a stoker, was asleep in his berth during a very hot night. When found he was comatose; temperature in the rectum, 107° F.; the skin pale and dry, the pupils widely dilated, and the pulse small and feeble. Cold water and ice were applied to the head and body. Brandy was given by the rectum, and liquid strychnine subcutaneously. By the use of ice water the temperature was reduced in half an hour to 104.5° F., but the patient still remained

comatose. His condition was one of extreme cardiac failure; the pulse being irregular, small and feeble; the superficial veins of the head and neck were full, and the face livid. It seemed probable that the heart was in a state of paralytic distention, and the venous system choked. He was then bled from the arm to about twenty ounces. Even while the blood was flowing, the good result was to be seen, the skin rapidly losing its lividity, and the pulse growing fuller and stronger. Evidently the relief afforded by the venesection had been sufficient to allow of the readjustment of the cardiac function. The temperature was now 105° F. The man eventually made a good recovery, with the aid of ice-water douches and full doses of quinine.

I do not mean to imply that blood-letting is a valuable treatment for insolation. The above case might apply to cardiac failure following hyperpyrexia from any cause. I have quoted this case as the most typical instance of a life saved by venesection that is within my knowledge, for this man was moribund prior to the venesection.

The late Professor Hughes-Bennett, of Edinburgh, one of the strongest opponents of the irrational use of venesection, advised the use of small blood-lettings to mitigate the pain and distress of the last stages of aneurism. The advice seems reasonable, and coming from such an authority may be worthy of trial.

Throughout this paper I have used the term blood pressure preferably to arterial or venous tension, for the reason that the former term conveys a more definite meaning than the latter. When we speak of arterial tension do we not really refer to the pressure under which the blood is contained in the artery? I do not speak of the actual tension of the blood, since I am not enough of a mathematician to follow so abstruse a question as that of fluid tension. If the term arterial tension refer to the strain upon the vessel wall, it may well involve us in contradiction. For if the arterial wall be muscular, elastic and healthy the blood pressure within the artery may be very high (as in acute nephritis), while the tension of the arterial coat remains low; and, conversely, if the arterial wall be diseased, a comparatively low pressure may well raise the tension of the vessel wall to breaking strain. For these reasons I prefer to avoid the term arterial tension, and to use the term blood pressure, as having a more definite meaning.

I have endeavored to show that clinical research affords many interesting lines of study to those of us who, being engaged in general practice, have neither laboratory nor hospital to interest them. There must be many more indications for venesection than those I have dealt with. I have merely taken for consideration certain cases which may be looked upon as types. In the case of any therapeutic agent it is necessary that we should formulate the typical occasions for its use; we need not, and should not, hold only to type cases, but should vary our formulæ to meet the needs of individual disease.

[Written for the MEDICAL BRIEF.]

Tuberculosis and Its Prevention.

BY FRANCIS EDMUND CLAY, M. R. C. S. (ENG.), L. R. C. P. (LOND.),
Fellow of the Guthrie Society.
Lewisham, London, England.

The question of the spread of tuberculous disease is of interest, not only to the bacteriologist and to the denizens of the pathological laboratories, but to the physician engaged in active practice, who is usually the intermediary between the pure scientist and the rest of the community. A layman has no time and no opportunity, even if he had the requisite knowledge, to study and digest technical reports, and, naturally, looks to his doctor for information concerning all that appertains to the maintenance of his health and that of his family. The physician, in this way, performs a most useful and important function, and it behooves him to keep well abreast with recent scientific knowledge, and to be true to the trust which is placed in him. This is especially the case with regard to tuberculosis, for there is no disease, acute or chronic, so productive of human suffering or so destructive of human life. Pulmonary phthisis, or consumption and tuberculosis, are so closely allied that the terms are not infrequently used as if they were

practically synonymous, but this is certainly a mistake. Some people, impressed by the confusion resulting from the employment of the word phthisis, have suggested dropping it entirely and substituting some such expression as tuberculous disease of the lungs. That, however, is not free from objection, for there are some cases of phthisis which are not tuberculous, at all events in an active sense. Take, for example, fibrous phthisis. This may have commenced with a tuberculous infection at the apex of one lung, but this is not invariably the case, and the inhalation of particles of irritating dust may have been the exciting cause. Again, at a later stage of the disease, especially if the fibrous tissue is undergoing calcification, the tubercle bacilli may have entirely disappeared from the expectoration, or they may have been replaced by various forms of streptococci.

In this paper I do not intend to confine myself to any particular disease of the lungs, whether tuberculous or not, but shall deal with the subject in its very broadest aspect. Tuberculosis is the same disease—modified, it is true, by structural conditions, and also by environment—whether it occurs in the meninges, in the peritoneum, in the lungs and pleura, in the joints, or in any other part of the body. The symptoms are different, and the mode of entrance of the bacilli into the system may be by different portals, but the disease is the same whatever organ be invaded, and whether the host of the parasite is man or monkey, beast or bird. Avian tuberculosis, in the mode of reaction of the bacilli to certain reagents, may differ slightly from human and bovine tuberculosis, but this is a difference of detail and not of principle.

The evidence of the transmission of tuberculosis from animals is somewhat conflicting, but no one will deny that it would be little short of madness to consume animal flesh impregnated with tubercle bacilli. In the same way, milk from a tuberculous cow should be rejected unless thoroughly boiled, and even then it would be better not to use it. It has been proved that the ingestion of any material which contains the tubercle of bacillus is a danger to the consumer, but the limitations of this risk have, as yet, not been completely defined. It is said that forty per cent of the children who die in hospitals die tuberculous, and although congenital causes may have some influence, they can not be regarded as the predominant factor. It is difficult to resist the conviction that the consumption of unboiled milk during the period which follows weaning, must exert a very powerful influence in bringing about the fatal prevalence of the disease at that period of life. The practical points which force themselves on our attention are that we should be extremely guarded in sanctioning the use of unboiled milk for children, and that we should be especially cautious in prescribing raw meat and meat juice in cases of infantile atrophy and dyspepsia. What we demand is unremitting sanitary precautions in the inspection, not only of dead meat, but also of living cattle. In the case of inspected stock, the injection of tuberculin may be employed as a diagnostic agent, and this mode of investigation in skilled hands gives reliable results. If an animal should prove to be infected it should be slaughtered and its carcass cremated by the plentiful use of petroleum, or some similar means. The question of compensation may present difficulties, but they can be overcome, and money spent in this direction is not waste, but true economy.

There is not a vestige of doubt that consumption is a communicable disease. The evidence in support of this view is partly clinical and partly experimental. The term "contagious" is vague and ill defined, and with regard to phthisis, must be held to be identical with the word "communicable." Scarlet fever, typhoid fever and syphilis are all communicable diseases, but they are contagious to a very different degree. Until the last thirty years phthisis was not regarded as a communicable disease, although little by little the view has gained ground that it is contagious to a very marked extent. In Germany phthisis is considered to be almost as infectious as the zymotic diseases, and in their hospitals cases of pulmonary tuberculosis are treated, not in the general wards, but in wards set apart for the purpose. In their prisons, a prisoner found to be consumptive, is at once isolated, and an elaborate process of disinfection is

resorted to in order to prevent the cell from becoming a center of infection. In Italy, consumption has long been regarded as a contagious disease, and when any one dies of this complaint, the bed and all the clothes of the deceased are destroyed, and the room, after being thoroughly cleaned and disinfected, is shut up, and is not again occupied for some time. The greatest terror exists amongst them as to the communicability of the disease. Phthisis is more likely to be communicated amongst the poor, with whom accommodation is more limited than amongst the well-to-do, who have the advantage of large and well-ventilated rooms.

In a large number of cases tuberculosis of the lungs is the direct outcome of inhaling dust containing dry bacilli, which, under favorable conditions with regard to warmth and moisture, are soon restored to activity, and lodging in the apex of the lung, where there is a limited range of movement, set up miliary tubercles, followed by caseation and the formation of vomicæ. The habit of spitting in the streets and in public conveyances is a source of such danger to the community that in almost every country legislative interference has been invoked to limit the practice. There has been a marked improvement in this respect of late years, and it is, perhaps, to be regretted that public prosecution is not more frequently the result of the infringement of so salutary a measure. It is comparatively easy to prevent the propagation of phthisis and other tuberculous diseases, but treatment is often unsatisfactory, and is, at best, a costly mode of procedure. In England, alone, the mortality from diseases classified under the head of tubercular amounts to from fifty to sixty thousand a year, whilst the cost to the community in poor rates may be set down as a million pounds, and the loss to the working classes in the shape of wages can not be less than ten millions per annum. Quite apart from the lamentable waste of life, the financial aspect is one of most serious importance, and any capital expended in attempting to wipe out this dire disease, the scourge of humanity, is properly expended, and will surely bring its reward, perhaps not at once, but in the near future.

Much might be done in the way of legislative enactments regulating the width of streets, the height of houses, and, above all, the preservation of open spaces. The establishment of public wash-houses has done much to minimize the frequency with which the washing and drying of clothes is carried on in small rooms. More might be done in this direction by the establishment of public workrooms, where on payment of a small fee, tailoring, bootmaking, and other similar employments might be followed. Overcrowding is not altogether confined to the poor. At many popular seaside resorts the cheaper lodging-houses are, during the season, disgracefully overcrowded, and the same assertion may be made with respect to some of the large hotels. Consumption and other tuberculous diseases are more common in large towns than in sparsely populated localities, and in towns it is the densely inhabited, poorer districts which suffer most. Sufficient air space for the inhabitants is more likely to be found in the houses of the well-to-do than in the dwellings of those to whom the question of the ability to find the rent is of more pressing importance than the sanitary state of the rooms, but it must be admitted that this is not always the case. It may, reasonably, be urged that legislation and legislative enactments do not fall within the province of the practising physician. This is undoubtedly, to a certain extent, true, but matters appertaining to the health of the community fall within the scope of his professional duties, and he would be wanting in public spirit were he to neglect his obligations in this respect. Although the average layman naturally resents medical interference in the range of pure politics, he is ready enough to listen to an expression of opinion on a purely technical point when backed by an intimate acquaintance with the subject, and a desire to be of some service. For the physician to carry weight and to make his influence felt, he must be perfectly clear in his own mind as to what it is that is wanted, and to be able to explain, logically and concisely, the reasons for the faith that is in him. The points to be aimed at, and the arguments to be employed, will probably vary somewhat with the locality and the opposition

to be encountered, and it is as well to remember that progress is often slow, and that success can be insured only by much diplomacy, and the exercise of considerable tact. People who will not vote the whole ticket may often be found amenable to reason on one or more points which appeal to them personally. By letting them go slowly at first, a whole-hearted support will, ultimately, be secured.

These are some of the practical points to which I attach most importance:

The inclusion of consumption in the list of notifiable diseases. In my own borough of Lewisham voluntary notification of phthisis is the custom; that is, we report to the Medical Officer of Health, with the consent of the patient.

The official announcement of the fact that, in the event of a person having died of consumption, the rooms occupied by him will be disinfected by the sanitary authorities free of charge. The facilities for disinfection should extend to any dwelling which has been vacated by a consumptive person, and should be enforced in the case of hotels and lodgings at health resorts frequented by sufferers from chest diseases. In my district disinfection is performed by the sanitary authorities free of charge on the recommendation of the physician.

To make it illegal to let any house or room in which any person within two months has suffered from consumption, without having had it properly disinfected.

To make it an offense, punishable by fine or imprisonment, for any person letting a house or room to willfully conceal or deny that there has been consumption in the house.

To call the attention of shipping agents to the fact that there is danger to a healthy person occupying the same cabin with a consumptive, especially on long voyages, and when, from the inclemency of the weather, the passengers are not much on deck.

To make it compulsory for a consumptive person, taking a long voyage by sea, to notify the nature of his complaint before starting.

To call the attention of railway companies, on lines connected with health resorts for consumptives, to the necessity for having the sleeping carriages carefully cleaned with disinfectants, and, above all, thoroughly aired.

To insure the removal of hospitals for consumption from cities to convenient and open suburbs. The out-patient department might, for convenience, be retained in town, but there should be no in-patients. Hospital cars to ply from certain fixed points to the hospital and back, and not be available for the general public.

To insure the exercise of greater care in the inspection of carcasses intended for food, and the compulsory rejection of those exhibiting indications of the tuberculous disease.

To insure the rejection, as an article of food, of the milk of tuberculous cows.

To insure the inspection of herds by paid officials, with the view of detecting tuberculous disease, and isolating or destroying infected animals.

To insure the prevention of overcrowding amongst animals intended for consumption as food.

To prevent overcrowding by regulating the amount of cubic space allotted to each person in common lodging-houses, workshops, etc.

The extension of wash-houses, and the establishment of places where certain trades, such as tailoring and bootmaking, could be carried on by the payment of a small fee.

Back-to-back houses to be condemned, and the height of houses in cities restricted in proportion to the width of the streets.

Blind alleys to be opened out, and the custom of building houses at right angles to the length of the streets, forbidden.

Dusty occupations to be strictly regulated, so as to minimize the danger to those who are compelled to follow them.

Convents, and other religious communities, to be periodically inspected by some independent authority, with the view of ascertaining the general condition of the health of the inmates, and suggesting such sanitary and other measures as may seem necessary.

With regard to matters of hygiene affecting the tuberculous, I think that the medical man practising in a community might make it his personal care to dissem-

minate, by papers in the medical press or by lectures or pamphlets, or even leaflets, such information as, in his opinion, may prove instructive and beneficial in preventing the spread of disease. To this no ethical objection can reasonably be taken, if the object aimed at is not personal advancement, but the maintenance of the health of the population. In London and many parts of England, most of the leading hospitals distribute freely leaflets, giving advice on the feeding and management of young children, and this may be regarded as a precedent.

The examination of the sputum for tubercle bacilli by sanitary authorities gratis, on the recommendation of the physician.

The following are the points on which I lay most stress. I may say, at once, that I do not claim them as original, and that they are adapted from similar rules and aphorisms contained in a work on the "Prevention of Consumption," by Dr. Murrell, of the Westminster Hospital, London.

1. No one should sleep in the same room with a person suffering from phthisis, especially when the expectoration is abundant.

2. The temperature of the room occupied by a consumptive person, should not be high, especially when he is confined to bed, and efficient ventilation should be secured, preferably by means of open windows.

3. The patient should expectorate into a spittoon containing an efficient disinfectant. The expectorated matter should be destroyed by mixing it with fine coal and burning it in the fire.

4. The pocket-handkerchiefs used by the patient should be thrown into a bucket containing a disinfectant solution, and should be scalded before being sent to the wash. Instead of the ordinary handkerchief, a paper substitute, or pieces of rag, may be used, and these should be burnt.

5. It should be remembered that the risk of conveying the disease from the sick husband to the healthy wife who nurses him is great, and *vice versa*.

6. The wife who nurses a husband suffering from consumption should get fresh air as much as possible, and should do all in her power to maintain the condition of her own health.

7. Wind instruments and other articles which have been used by a consumptive person, to be destroyed when no longer required, or not to be used by healthy people without previous disinfection.

8. Not to travel on board ship in the same cabin with a consumptive person. Apply to the surgeon for another berth, or for an order to have the sick person removed to the ship's hospital.

9. Food should be well cooked, not only superficially, but throughout.

10. In the case of tuberculous children, or of people predisposed to phthisis, boil all milk previous to use.

11. People predisposed to phthisis should select as a place of residence a house on a gravel soil, preferably on a slope and facing south.

12. Those predisposed to phthisis should select non-sedentary occupations, and should be encouraged to spend as much time as possible in the open air, and, above all, in sunlight.

13. People should be taught to value the importance of amusements of all kinds, and to recognize the danger of leading monotonous and depressing lives.

14. The children of phthisical parents should devote reasonable time to athletic exercises, and should not be allowed to follow sedentary occupations.

15. These children should be encouraged to migrate, and not to live in the house which their parents occupied.

[Written for the MEDICAL BRIEF.]

Ringworm and Its Treatment.

BY A. WINKELREID WILLIAMS, M. B., C. M. (EDIN.), D. P. H. (LOND.),

Physician to the Skin Department, Royal Alexandra Hospital for Sick Children.
Brighton, England.

No. II.

During the past ten years many workers have endeavored to perfect X-ray treatment as an ideal mode of epilation. The difficulty of estimating the quantity, and, above all, the quality of the rays, has been a stumbling block. Exposures short of producing complete temporary baldness are absolutely useless, and it is an easy

thing to overstep this point and produce an X-ray burn, followed by permanent baldness. Sabourand and Noiré have, in a great measure, overcome this difficulty by the introduction of their platino-cyanide radiometer. This gives a great margin of safety, but it is not absolute, and occasionally cases have gone wrong, even when the radiometer is properly used. This necessitates warning the parents of this possible accident, or running a risk of an action for damages. Dr. J. M. H. MacLeod has devised an apparatus which further checks the Sabourand-Noiré radiometer; it is described in the *British Medical Journal*, September 16, 1905. The author, after seeing this at work, has erected a similar installation, and finds it most valuable. Undoubtedly, X-ray treatment is the most certain and rapid of all ringworm treatments, but, despite the most elaborate and expensive apparatus, it is not devoid of risk, and until greater perfection in measuring the dose is obtainable it will be found that many parents will not consent to its use. Moreover, in children under five years, and in cases where active inflammatory impetiginous conditions exist, X-rays certainly should not be used. It is evident that the older therapeutic measures have still the greater place in ringworm treatment.

It is of value and interest to note various methods that have been recommended, from time to time, by different authorities, some of which are here given:

DR. ALDERSMITH.

Croton Oil Treatment.—I. When applicable:

1. Chronic patches that have resisted treatment for a long time.

2. Moderate-sized recent patches, when rapid cure is imperative.

3. Old, desseminated ringworm, with isolated hairs and black dots.

II. *Modus operandi:*

1. Patches.—Clip hair short all around patch and mark it out with skin pencil. Surround patch with layer of fat. Paint patch with croton oil and allow to dry, and then poultice freely with hot linseed meal poultices. Next day empty any vesicles or bullæ. Examine and see if sloughing; if no sloughing reapply, and continue until a kerion-like condition is set up, then epilate and apply some mild antiseptic, *e. g.*, glycerine and carbolic acid.

2. Disseminated Hairs.—Aldersmith's needle used. Drop in croton oil, seven drachms, and carbolic acid, one drachm; colored red with alkanet, and carefully insert needle down to bottom of follicle. Next day remove stump with forceps.

N. B.—It is not safe to needle hairs close together.

Another Treatment.—Very valuable in diffuse ringworm of scalp:

1. Shave head.

2. Apply three, four or five times a day the following *inflammable* lotion:

℞ Salol.....60 grains.
Acid Boric ..... 6 drachms.
Ether Meth..... 5 ounces.
Ol. Rosmar..... 1 drachm.
Spt. Vini Meth .....ad.....20 ounces.

PROFESSOR MCCALL ANDERSON.

1. Cut hair short.

2. Epilate. (*a*) From edge of patch. (*b*) Extend to center.

3. After epilating one square inch, rub in *at once* some paraciticide ointment.

PROFESSOR BESNIER.

1. Keep hair very short.

2. Epilate and keep epilated a zone around patches.

3. Anoint with vaseline and curette away all epithelial debris.

4. Wash and soak patches well with alcohol, 100.0; boric acid, 1.0; chloroform, 5.0.

5. Thoroughly curette patch through epithelium to papillæ, *i. e.*, until it bleeds well.

6. Stop bleeding by pressure with sterilized cotton wool sponge.

7. Again wash with lotion (4).

8. Apply on cotton pledget Van Swieten's solution, 100.0; glaceal acetic acid, 1.0 (V. S.'s solution: Hydrarg. perchlor, 2 grains; alcohol, 3 drachms; water 4 ounces).

9. Cover patches with acetic acid, 1 in 100, vigos plaster.

10. On reappearance of diseased hairs repeat epilation and scraping.

DR. W. S. CORLETT.

1. Cut hair short.
2. Shave patches.
3. Wash regularly.
4. Epilate when possible.
5. Use various antiseptic ointments.

DR. RATCLIFFE CROCKER.

1. Cut hair short.
2. Wash head three times weekly with soft soap and weak carbolic lotion.
3. Epilate, in older children, as much as can be tolerated.
4. Rub in antiseptic ointment, *e. g.:*

℞ Cupr. Oleat .....1 drachm.
Lanolin.....5 drachms.
Parolein.....3 drachms.
Or else a 5 to 20 per cent Oleate of Mercury.

Another Method—Apply to patch Coster's paste with a hard brush, and in three days' time tear off scab.

Another Method.—After cutting hair, shave patches and area three-quarters of an inch around them, and then paint daily for a week with ten grains salicylic acid in one ounce of collodion. Remove thick collodion skin and attached hairs with forceps. Shave again and reapply.

DR. FOULIS.

1. Cut hair short.
2. Wash with ten per cent carbolic soap.
3. Rub areas with turps. by finger for three or four minutes, until part stings, then paint with two or three layers of tincture of iodine. Repeat night and morning in severe cases, or every night in less severe.

DR. G. HENRY FOX.

1. Cut hair short.
2. Shampoo head thoroughly each day.
3. Epilation most important. (*a*) Long hairs for a zone around patch; (*b*) at leisure, hairs of patch.
4. Rub in twice daily sulphur ointment, or oleate of mercury ointment, or ten per cent chrysarobin ointment.
5. After patches look healthy allow hairs to grow, and apply daily five per cent salicylic acid in oil.

PROFESSOR HALLOPEAU.

1. Cut hair short.
2. Wash every morning with soft soap.
3. Friction with

℞ Spt. Camphor. .....125.0.
Ol. Terebinth ..... 25.0.
Liq. Ammon.... ..... 5.0.

4. Apply one per cent iodine in vaseline.
5. Wear gutta percha cap during day.
6. At night reapply iodine ointment.

DR. HARRISON.

1. Cut hair to one-quarter of an inch.
2. Rub affected parts night and morning with small quantity of

℞ Pot. Caustic..... 9 grains.
Acid Carbol. .....24 grains.
Lanolin..... ½ ounce.
Ol. Coca Nuc..... ½ ounce.
Ol. Caryoph..... ..... q. s.

3. Anoint rest of scalp with

℞ Ung. Borac.....2 ounces.
Ung. Eucalypt .....2 ounces.
Ol. Caryoph ...:..... ½ drachm.
Ol. Coca Nuc .....ad .....6 ounces.

DR. ALLEN JAMIESON.

1. Keep hair short.
2. Wash daily, using fluid superfatted soap with hot water and flannel.
3. Starve fungus by free application of antiseptic ointment, *e. g.:*

℞ Sulph. Precip..... 1 drachm.
Hydr. Am. Chl. .....80 grains.
Lanolin ..... 1 ounce.

or else

℞ Oleat. Cupr.....50 grains.
Lanolin ..... 1 ounce.

4. Every other day clean up seborrhea, etc., of scalp, and prevent infection by using all over scalp:

℞ Acid Tannic..... 1 drachm.
Acid Carbol .....5 grains.
Cold Cream.....ad.....1 ounce.

PROFESSOR KAPOSI.

1. Rembve scabs, scales, etc., by oil poultices, with or without balsam Peru, carbolic acid, or naphthol.
2. Wash thoroughly with soft soap.
3. Daily epilation.
4. Apply paraciticide, *e. g.:*

℞ Ol. Rusci .....15.00 parts.
Spt. Sapon Kalen .....25.00 parts.
Sulph. Precip .....10.00 parts.
Spt. Lavand..... 0.50 parts.
Bals. Peru..... 1.50 parts.
Naphthol ..... 0.50 parts.

DR. LIVERING.

1. Cut hair short.
2. Wash head twice weekly.
3. Rub on, night and morning, antiseptic ointment, *e. g.*, hydrarg. oleat, ten to fifteen per cent.

DR. LYLE.

For chronic cases:

1. Keep head shaved.
2. Scrape patches with sharp spoon.
3. Rub well in with cotton swab, argent. nit. one drachm; spirit (proof), one ounce.

4. Twice weekly scrape away black layers and reapply argent. nit.

5. Treat rest of scalp with five per cent hydrarg. oleat. in oil.

MR. MALCOLM MORRIS.

1. Cut hair short for one inch around patches.

2. Epilate.

3. Avoid all soap and water washing, but start treatment by cleaning all scales, etc., off with soft soap and spirits.

4. Rub in ointment—ten grains chrysarobin, one ounce—but leave no excess upon the skin. Continue use of ointment until tenderness and red halo develop.

5. Then apply ungt. acid boric.

6. When inflammation reaction subsides, reapply chrysarobin.

7. After three attacks chrysarobin inflammation, try various ointments in succession, e. g., (*a*) sulphur, (*b*) mercury, (*c*) iodine.

DR. STEELE PERKINS.

1. Shave affected area.

2. Rub in common salt and vaseline, night and morning, until part becomes very sore.

3. Apply soothing remedy.

SIR WM. JENNER.

℞ Sodii Hyposulphat.....120 grains.
Aquæ..... 1 ounce.
Cover with oil silk.

DR. QUINQUAUD.

1. Spray patches with methyl chloride and curette, to remove all scales, scabs and such debris.

2. Apply to whole head, more freely to patches:

℞ Hydrarg. Biniodid..... 3 grains.
Hydrarg. Bichlor.....15 grains.
Alcohol. 90%..... 1 ounce.
Aq. Destil .....ad..... 8 ounces.

3. Cover patches with round piece of plaster:

℞ Hydrarg. Biniodid..... 3 grains.
Hydrarg. Bichlor.....15 grains.
Emplast. Saponis ..... 8 ounces.

4. Cover with a linen cap.

5. In forty-eight hours remove plaster, cleanse scalp, reapply lotion and plaster. Repeat until cured.

DR. SABOURAUD.

1. At night keep patches covered with tampon soaked in solution of $CaCl_2$ in water (three drachms in ten ounces), covered with gutta percha tissue.

2. Wash in morning with soap and water and cover with empl. plumbi for day.

3. Twice a week paint with tincture of iodi.

DR. JOHN V. SHOEMAKER.

1. Cutting hair very little good. Epilation absolutely useless.

2. Avoid water on scalp, but wash area and skin around with alcoholic solution of borax.

3. Sponge areas daily with a weak alcoholic solution of thymol, naphthol or mercuric chloride.

4. Apply fifty per cent boroglyceride. If marked improvement does not follow in a short time, rub well in oleat of copper, one in five or ten, and occasionally alternate with oleat of mercury.

DR. PYE-SMITH.

1. Cut hair short, clean up crusts, scales, etc., with poultices.

2. Cleanse patches with soap, water and flannel, and then rub in ungt. hydrarg. am. chlor.

3. Anoint rest of scalp with carbolic oil (one in fifteen or one in twenty).

DR. LOUIS STARR.

1. Cut hair short.

2. Wash daily with soap and water, followed by saturated and boric solution.

3. Apply antiseptic ointment twice daily, *e. g.:*

℞ Sulph. Precip.....1 drachm.
Cold Cream .....2 drachms.
Lanolin.....6 drachms.

4. Every four or five days apply, with stiff brush, Coster's paste (iodine, two drachms; light oil of wood tar, six drachms).

DR. P. G. UNNA.

1. Cut hair short.

2. Paint round head a band of zinc jelly.

3. Rub well all over scalp:

℞ Chrysarobin..... 5.0 parts.
Acid Salicylic..... 2.0 parts.
Amm. Sulpho-Ichthyolate..... 5.0 parts.
Ung. Simple.....88.0 parts.

4. Cover head with gutta percha tissue and fix with zinc jelly and bandage.

5. Tie flannel cap over all.

6. Every twenty-four hours for next four days open gutta percha tissue by side slit, clean scalp and reapply the ointment. Cover slit with zinc jelly.

7. After four days remove cap, but keep jelly bands, wash off chrysarobin and for three days treat with five per cent amm. sulpho-ichthyolate ointment.

8. At end of seven days wash off jelly and thoroughly cleanse scalp with oil and soap.

9. Repeat above treatment four times and expect a cure.

DR. NORMAN WALKER.

1. Cut hair short (epilation—theory correct, practice useless).

2. Wash frequently with antiseptic soap.

3. Thorough massage of ointment into scalp with thumb, *e. g.:*

℞ Sulph. Precip..... ½ drachm.
Hydr. Am. Chlor..... ½ drachm.
Acid Salicylic.....20 grains.
Lanolin..... 1 ounce.
Vaselin..... 1 ounce.

Or,

℞ Chrysarobin..... 3 drachms.
Cera Flav..... 2 drachms.
Lanolin..... 5 drachms.
M.: Melt, mix, and shape into a cosmetic rod.

RINGWORM OF NAILS.

1. Scrape nail down as thin as possible. Cautious use of liquor potassæ helps.

2. Clean and scrub nail surface, round and under nail with liquor potassæ. (Painful, but necessary.)

3. When patient can not bear potash cleansing any longer, wrap nail and finger tip in lint, thickly spread with

℞ Acid Salicylic.....40 to 120 grains.
Emplast. Plumbi..... ½ ounce.
Vaselin..... ½ ounce.

and keep this constantly applied.

Another Treatment.—1. Soak nail under oiled silk for fifteen minutes, with

℞ Liq. Potass.....½ ounce.
Aq. Destil.....½ ounce.
Pot. Iodid.....½ drachm.

2. Apply on lint, under oiled silk, for twenty-four hours:

℞ Hydrarg. Perchlor.....4 grains.
Spt. Vini Rect..... ½ ounce.
Aqua..... ½ ounce.

3. Reapply until cured.

Another Treatment.—Remove entire nail and dress with some antiseptic ointment.

RINGWORM OF BEARD.

There is no doubt about the extreme value, in fact, necessity, of careful and painstaking epilation in this region. I have invariably found the following treatment rapidly successful.

1. If much scabbing, remove by soaking chin in kerosene, or if patient objects to this, with boric starch poultices.

2. Smear chin with salicylic oil (five per cent), and then carefully epilate infected regions, picking out all hairs loosened by suppuration, and immediately after epilating one square inch rub on

℞ Hydrarg. Perchlor.....3 to 5 grains.
Lanolin.....4 drachms.
Aq. Rosæ.....2 drachms.
Ol. Amygdol.....2 drachms.

3. Spray rest of chin with

℞ Sanitas Oil..... ½ ounce.
Spirit. Vini (Proof).....10 ounces.

Patient to wash chin, keep hair clipped short or shaved; then apply ointment to infected areas, and use spray to rest of chin, and same to be epilated three times a week.

INGUINAL AND CRURAL REGIONS.

1. Wash with soft soap twice daily.

2. Sponge with ether.

3. Freely sponge with freshly-prepared solution of sulphurous acid.

4. Dust with boric acid, one drachm in one ounce of Fuller's earth, or else use some antiseptic ointment.

RINGWORM OF BODY GENERAL.

Wash areas with soft soap twice daily, and paint with tincture of iodi three times a week, and apply twice daily, after washing, some antiseptic ointment.

GENERAL HYGIENE.

Isolation of infected cases is, theoretically, the correct procedure, but the long duration of the disease makes it almost impossible, in many cases.

In large towns ringworm schools or school rooms are practically necessary or the stamping out of the disease is impossible. If cases attend ordinary school they must have entire scalp closely clipped and completely smeared with antiseptic ointment, and be covered with cotton skull cap. They must go to school one-half hour before the other children; a teacher should receive their hats and put them in a special place. The infected children must be dismissed before the others, and it should be seen that they return home and not linger about the school or playground. A trained teacher or nurse should examine weekly the heads of all pupils, and any showing scurfiness,

etc., to be at once referred to a medical man.

Infection is favored by damp and ill-lighted rooms, and by not exposing the scalp to light. Seborrheic conditions of scalp especially conduce to ringworm infection.

Children exposed to infection should have scalp frequently washed, well dried, and, after washing, a little pomade applied to scalp (not hair shafts) by partings of the hair in several directions. One of the best pomades is Unna's Ungt. Pomadini, *i. e.:* Ol. sherbrom, 2.0; ol. amydol, 4.0 (or in winter, 6.0); ol. rosæ, q. s.

To this may be added, if opportunities for infection are very great, three per cent of sulph. precip. and one or two per cent of resorcin.

Violent hair brushing to be avoided and combs should have rounded teeth, wide apart.

The children exposed to infection should be kept in the open air as much as possible, and, excepting during very hot sunlight, should wear no hats.

[Written for the MEDICAL BRIEF.]

Diagnosis and Therapeutics of Pneumonia.

BY L. A. NIPPERT, M. D.,

Clinical Professor of Medicine in the Medical Department of the University of Minnesota. Minneapolis, Minn.

Symptoms of pneumonia are so variable, depending on the severity of the infection, on the age and temperament, that the disease may be diagnosed on sight, and again may remain unsuspected for days.

The facial expression indicates a severe disease, the moving of the wings of the nose, the expiratory moan, the cutting pain in the side, compelling the patient to avoid the slightest motion; the rusty sputum and high temperature present a different picture from that of the old man who consults you at your office, feeling the need of a tonic. No pain, no cough, not aware of any shortness of breath, no fever, but a slightly accelerated pulse, and a consolidated lobe of the lung. The latter patient, however, is in a much more dangerous state than the former.

This is illustrated in the following case: An old lady, with the typical symptoms of pneumonia, lay for three weeks at the point of death. She finally recovered. Two years later, after a slight feeling of illness for several days, she attempted to go downtown. She returned feeling weak. I saw her a few hours later. She made no complaint whatever except that of exhaustion. On examination, the lower lobe of the right lung was found to be solid. She again had pneumonia, from which she recovered in two weeks.

The diseases which we have to consider in the differential diagnosis of pneumonia are pleurisy, empyema, tubercular consolidations, meningitis, and we should not lose sight of the fact that cholecystitis and even appendicitis, have been diagnosed when pneumonia was the ailment. The mode of onset, physical signs, and if in doubt, the use of the exploratory needle —which latter will also determine the character of the effusion—will distinguish pleurisy and empyema from pneumonia. Tubercular consolidations are not as extensive, the daily temperature curve more variable, and if located in the apices bacilli are usually found in the sputum. If affecting one of the lower lobes, there may be an extensive tubercular infiltration and no bacilli. Acute cholecystitis may, at the beginning, give rise to the same symptoms as pneumonia, except the marked acceleration of respiration and absence of the expiratory grunt. The same may be said of appendicitis, especially in children, in which the pain of pneumonia, even in apex pneumonia, is frequently referred to the abdomen.

That the meningeal symptoms of pneumonia overshadow all others in some patients, is shown best by quoting the following case:

B. S., a delicate girl of nervous temperament, was taken suddenly with a severe headache, vomiting, and partial loss of consciousness, not answering any questions for three days, not asking for anything to eat or drink, with headache, irregular pupils, bowels constipated; she presented all the symptoms of meningitis until about the fourth day, when acceleration of the respirations was noticed. On examination the upper lobe of one of the lungs was found to be consolidated. The

disease ceased by crisis and she made a perfect recovery. Some years later the same patient had another attack, in which the symptoms were again so markedly the symptoms of meningitis that a diagnosis of meningitis was made for the second time, and yet the course of the disease showed it to be pneumonia, from which she recovered.

In considering the therapeutics of pneumonia, prophylaxis is the first step. Careful protection from the inclemency of the weather, especially during the east winds of spring, and cleansing of the mouth and nose by antiseptic solutions, preventing the introduction of pneumococci into the air passages. The sputum of the patient should be destroyed, as in tuberculosis. As in most self-limited diseases the tendency is toward recovery, and the majority will get well without treatment, while some will succumb in spite of all our efforts. A number will recover under judicious care who would not survive if left alone.

I know of no remedy which will abort the disease, neither quinine nor ergot, nor guaiacol, and the salicylates have proven reliable in my hands. Specific treatment by sera is yet in the experimental stage. And even "One Hundred Cases Without a Death" is no criterion of the efficacy of any abortive treatment, unless similar results can be obtained by other observers.

A bright room, pure warm, moist air, a comfortable bed, light nourishing diet, tepid sponge baths, a thin cotton vest, without impermeable cover, abundant water, with fruit juices or claret, freedom from disturbance and watchful supervision under an experienced nurse, are of prime importance. To stimulate secretion and excretion, calomel, followed by a saline, has held its place for half a century. After free catharsis has been produced, liquor ammonia acetatis and spirits of niter are the only drugs which the writer uses as a routine. The physician who, in his own case, has obtained marked relief of pain from the use of the mustard plaster, will not despise it as an old woman's remedy.

In asthenic cases an ice pack to the affected side is a friend indeed, while ice to the head relieves headache. Sponge baths are efficient in relieving the ill-effects of high temperature. Small doses of caffeine give much comfort, if employed in the first two days, but should not be used after consolidation has been completed. In the first stage, Dover's powder, or if the pain be severe a hypodermic of morphine, will bring relief from pain and induce rest. Later on, any form of opiate should be considered dangerous and used with the greatest care, if at all.

The majority of patients do not need alcoholics. Alcohol, as well as strychnine, should be administered judiciously, excessive doses should be avoided. A bitter tonic, like gentian, combined with essence of pepsin, stimulates and promotes digestion, and prevents the accumulation of distressing gases in the stomach and bowels.

Indication of heart failure during the crisis should be dealt with vigorously. A solution of camphor in oil, given hypodermically, and combined with hot salt solution by rectum or by hypodermoclysis, is a powerful and often lasting stimulant. Except in cases of edema of the lungs, in which it has proved a life saver, oxygen has not fulfilled the writer's expectations.

To recapitulate: Minute attention to the details of nursing, watchful care of your patient, combating conditions as they arise, with avoidance of interference with nature's effort, and of overstimulation, has, I think, given me as low mortality from pneumonia as I have seen quoted from other and more aggressive forms of treatment.

Syndicate Block.

[Written for the MEDICAL BRIEF.]

The Senile Prostate.

BY LEWIS SCHOOLER, M. D., LL. D.,

Professor of Surgery in the College of Medicine of Drake University.
Des Moines, Iowa.

Among the majority of practitioners there seem to be two ideas most prevalent regarding the above subject. One, that nothing can be done for the patient with an enlarged prostate, and the other, that every enlarged prostate should be immediately removed.

As in many other subjects, perhaps the middle ground is the safest. Many pa-

tients have suffered from an enlarged prostate so long that it is impracticable to resort to an operation looking to the complete removal of the gland. Those persons who have had the bladder distended for a great length of time, with, perhaps, more or less infection, have suffered almost irreparable injury to that organ; therefore they are feeble, broken down, and suffering from infection and illy-prepared to undergo an operation of this character.

Under these circumstances, it is much better to try the plan followed by Eastman, of Indianapolis, viz., inserting and retaining a large catheter, thus procuring drainage and enabling the surgeon to apply local treatment to a bladder that has largely lost its tonicity. This, of course, should be done at the hands of one who is competent, and under the most rigid asepsis, and, if possible, give the bladder an opportunity to regain its tone and remove the source of infection.

Another method that may be pursued in cases of this kind, is by performing the operation at two sittings. The first contemplates an opening through the perineum, and inserting a tube through the neck of the bladder, after the manner of the median lithotomy operation. This gives good drainage, an ample opportunity for inserting a large drainage tube, and if there is hemorrhage from the bladder after evacuating so large an amount of its contents, it affords sufficient opportunity for draining away the blood as it is poured out, and prevents the accumulation of clots. A little later, if the patient recovers sufficiently, and the bladder is likely to be of service, the gland may be removed, either in its entirety or one side may be selected and the other be allowed to remain.

An enlargement of the gland is not always a criterion of the amount of difficulty it produces. There are many very large prostatic glands that do not occasion any trouble, but the inexperienced surgeon, finding a gland of this kind, is very likely to recommend immediate operation, regardless of the condition of the patient.

The operation, when done at two sittings, is sometimes referred to sneeringly as the "picket fence" operation, as though the patient had fallen astride of the fence and punctured the bladder. The resemblance is not very striking. One is an unfortunate accident, the other is a rational procedure, calculated to give great benefit to the sufferers of this class.

If the bladder does not regain its tone, and the patient does not rally sufficiently to warrant the second operation, he is at least relieved while he lives from the terrors of an over-distended bladder.

In younger men, say between the ages of fifty and seventy, where retention is only occasional and sometimes due to errors in diet, exposure, cold, or habits of the individual, catheterization at frequent intervals, sometimes affords great relief. But if the patient is in good condition ,and the catheter is needed oftener than once in three or four months the glands should be removed, and in this class of cases the operation may be completed at a single sitting.

Incidentally, there is no simple procedure so bunglingly managed in the hands of the majority of practitioners as the introduction of a catheter. The surgeon of large experience is frequently surprised at the meager equipment of the general practitioner for dealing with cases of this character. He usually finds only an ordinary catheter, which is devised for the purpose of emptying the bladder.

I believe that it is better practice to use the soft catheter to evacuate the bladder. If they have a prostatic catheter or a Lohenstein catheter, or filiform bougies with a conductor, they fare better, and time can then be taken to ascertain whether a prostatectomy is immediately demanded. Every surgeon of large experience has had brought to his attention patients who have had retention for the first time, in which ineffectual but forcible measures had been resorted to for their relief, with the result that numerous false passages existed. These are frequently more dangerous than the difficulty from which the patient suffers, and are in bad condition, sometimes, to undergo a complete prostatectomy.

An improvement along these lines is demanded in the teaching of all the schools, and the student should have actual practice in the use of the catheter.

Citizens' National Bank Building.

[Written for the MEDICAL BRIEF.]

Two Interesting Cases of Fracture of Lower Leg.

BY E. F. DEAN, M. D.,

Professor of Anatomy in the Dental Department of the University of Denver; Demonstrator of Anatomy in the Denver Gross Medical College; Surgeon to the City and County Hospitals. Denver, Colo.

The two following cases present several interesting features, from the standpoint of age and habits of the patients. In the first, dissipation, alcoholism and irregular hours; in the second, steady habits and good health prevailed throughout life, the first recovering under great disadvantages, and the second dying very suddenly.

J. R., aged sixty-three, a man of dissipated habits, and who indulged in not only alcoholic liquors, but crude alcohol, and who had been a life-long sufferer from hip disease, fell on the street while in an intoxicated condition and fractured his right leg half way between the knee and ankle. He walked on this leg for several hours and, finally, dragged himself home and went to bed, refusing the services of a physician. The following morning a physician was called, with his consent. I found every evidence of thrombosis present on my first examination of the leg; this was followed by gangrene.

The limb was placed in a fracture box and watched for twenty-four hours, at the end of which time amputation was necessary. The leg was amputated half way between the hip and knee, finding it imperative to keep away from the hip on account of the existing hip disease. It was also essential to keep above the affected area.

Recovery was rapid and uneventful, after having an attack of delirium tremens. The remarkable feature of this recovery is that the patient had fairly lived on alcohol and whisky, had had for many years a disease of the right hip, and that he dragged the fractured leg around for hours, and remained without any treatment whatever for one night. No difficulty was experienced in treatment on account of the hip-joint trouble.

Case 2.—C. C., aged sixty-five, received a fracture of the lower leg, about three inches above the ankle; injury followed a street car accident. A simple fracture of both bones was found. The usual treatment was carried out and the patient appeared to start well on the way to recovery, when he developed a pulmonary thrombosis and died suddenly at the end of the first week.

809 Fourteenth Street.

[Written for the MEDICAL BRIEF.]

Diagnosis and Treatment of One Form of Chronic Constipation.

BY BERNARD ASMAN, M. D.,

Professor Diseases of the Rectum, Kentucky University Medical Department. Louisville, Ky.

A positive diagnosis is easily made by means of the Laws pneumatic sigmoidoscope in those cases of chronic constipation caused by acute flexure at some point in the large bowel. But before beginning the treatment a careful and thorough examination of the patient must be made, even though the primary cause is found to be an acute flexure in or about the sigmoid, as is the case in the majority of instances of severe chronic constipation. The stomachic or intestinal indigestion, as well as deficient intestinal, pancreatic, or hepatic secretions, must be investigated and treated. Should there be chemical changes producing fermentation and excessive flatulence, some antiferment, such as carbolic acid and glycerine, can be advantageously used. If the fecal matter, when discharged, is very dry and solid, some benefit may be derived from taking large quantities of water between meals, or just before meals if there is a great deal of mucous secretion in the stomach. Peristalsis, if deficient, will require stimulation. Directions regarding diet, exercise, etc., must be explicit. The patient must be regular in his daily habits, methodical in regard to meals, work, recreation, especially punctual in regard to time of defecation. Habit in this respect counts for much, and if neglected will defeat almost any plan of treatment.

The acute flexure can be relieved by repeatedly distending the bowel with either water or air, preferably the latter.

This can be done after placing the patient in the knee-chest position and inserting the sigmoidoscope by slowly and carefully pumping the air into the bowel by means of the pneumatic attachment to the sigmoidoscope; or, better, by means of a hard rubber rectal tube about four inches long attached to the tube of a multinebulizer. In this way the flow of air can be carefully regulated, being allowed to pass into the bowel very slowly, thus separating the folds and finally lifting up the descended loop of bowel out of the pelvic cavity. Loops of small intestine take its place, the sigmoid being held up in its normal position and the acute flexure being obliterated for a considerable time. That this takes place is proven by the fact that after a treatment of this kind the following evacuation will be free and easy, no matter how much difficulty or straining the patient has been accustomed to during defecation. Great care must be taken in the first few treatments to avoid too forcible dilatation. It must also be remembered that if much air is left in the bowel the patient will suffer considerable discomfort following the treatment. Soon, however, the patient becomes accustomed to treatment and the distention can be made more and more complete.

An advantage of the multinebulizer lies in the fact that the air can be impregnated with a solution which will act as an intra-intestinal stimulant to peristalsis. These treatments in the average case should be given every second day for the first week or ten days, after which twice a week is sufficient, and should be kept up, according to the severity of the case, from six to twelve weeks.

Massage, especially mechanical vibratory massage, furnishes a most excellent adjuvant in the treatment of these cases. It can be applied over the abdomen, following the course of the colon, up and down the spinal column as a general stimulant, and in the rectum itself as a direct stimulant to peristalsis. In many of these cases a mild degree of intra-intestinal stimulation is found necessary for the upper bowel at first, and to meet this indication a laxative can be given, the dose of which, however, can be steadily diminished as the effects of the local treatment become evident, and finally be discontinued entirely.

I have treated a number of cases in this way and am glad to be able to report that the cure is not only complete but seems to be permanent.

Hast Building.

[Written for the MEDICAL BRIEF.]

Diagnosis of Gastric Ulcer.

BY J. L. ROTHROCK, M. D.,
Clinical Professor of Diseases of Women in the Medical Department of the University of Minnesota.
St. Paul, Minn.

Formerly the diagnosis of gastric ulcer was made with considerable reserve, and rarely before the occurrence of complications such as hemorrhage or perforation was a positive diagnosis ventured upon. Within the last decade, however, since the surgical aspect of ulcer of the stomach has received so much attention, much has been added to our knowledge of this subject by a more careful analysis of the symptoms supplemented by the occasional exploratory laparotomy in obscure cases, and which is now a common procedure. Just as in the case of gallstones, we no longer wait for the occurrence of jaundice, or in extra-uterine pregnancy for rupture of the tube with collapse from intra-peritoneal hemorrhage, before making a positive diagnosis. So in gastric ulcer a careful analysis of the symptoms will enable us to make a positive diagnosis in a large percentage of the cases long before the occurrence of dangerous complications.

Clinically, ulcers are divided into acute and chronic.

While all ulcers may be considered acute in the beginning if they do not heal spontaneously, as most acute ulcers do, they necessarily become chronic—each class presenting distinctive characteristic features.

Acute ulcer occurs most frequently in women, and before the age of thirty. While on the other hand chronic ulcer is a disease of middle or advanced life, and is more frequent in the male. According to Taylor's statistics, seventy per cent of acute ulcers are found in patients under thirty, while only seven per cent of chron-

ic ulcer was found before thirty. Recent investigations point to the probability that the location of the ulcer may have much to do in determining its character, and the explanation ventured of the great frequency of chronic ulcer in the pylorics is based on the mechanical irritation to which ulcers in that region are subjected, together with certain anatomical peculiarities.

Acute ulcer is furthermore seen in its most typical form in anemic and chlorotic girls.

The chief symptoms of ulcer are pain, vomiting and hematemesis. Pain is a fairly constant symptom. It is located in the epigastrium, and frequently radiates to the back. In the beginning it may not be constant, depending upon the character of the diet, and it is in this stage that ulcer is so often overlooked, the pain being regarded as cardialgia due to indigestion from hyperacidity of the gastric juice. The pain begins after the taking of food, and persists until the stomach empties itself. Older text-books laid diagnostic stress upon the relief from pain on taking of food. My own observation, however, leads me to believe that this is true only of liquids which act, perhaps, by diluting the very acid gastric juice.

Vomiting is rather frequent in acute ulcer, and at times is a very characteristic symptom. It occurs soon after the ingestion of food, and is due to the irritation occasioned by the presence of food in the stomach, the secretion of which is excited by the taking of food.

Vomiting of blood is of much more frequent occurrence in acute than in chronic ulcer, and, as a rule, is much more profuse, and may even reach dangerous proportions. The blood may be bright red if the hemorrhage is copious, or if mixed with stomach contents it is usually dark from the action of the gastric juice. Marked tenderness is usually present on deep pressure over the epigastrium.

In chronic ulcer pain is perhaps the most constant symptom, and rarely absent. It begins in from one to two hours after taking food, and persists until the stomach is empty; it may be very intense, and is usually paroxysmal in character. It is located in the epigastrium, and is deep-seated, radiating to the back. Vomiting is less common in chronic ulcer, with the exception of voluntary vomiting which patients frequently resort to in order to relieve their pain. Vomiting of blood is by no means common in chronic ulcer, and many patients suffer for years from this condition without having vomited blood.

The appetite in both forms of ulcer is normal or increased, and in this particular it differs from cancer, in which there is frequently loss of appetite. In both of these diseases there is frequently marked emaciation, but as has been well said, the patient with ulcer, while his appetite is unimpaired, is afraid to eat because of the pain he knows he will suffer if he indulges his appetite. While the patient with cancer has no desire to take food.

Constipation is almost always present. There is usually marked tenderness over the epigastrium, especially in the region of the pylorus.

Examination of the stomach contents will invariably show marked excess of free hydrochloric acid, which furnishes a very important differential diagnostic point between ulcer and cancer; in the latter it being usually greatly diminished or absent. A small percentage of cases, especially the acute group, appear to run a latent course, producing no symptoms until hemorrhage or perforation announce their presence. In further confirmation of this, instances in which scars are found in the stomach at autopsy without history of previous stomach trouble would point to the latent course ulcer may run. However, symptoms are soon forgotten, and many patients suffer the symptoms of indigestion without consulting a physician.

As illustrative of the usual course of ulcer the following typical cases are cited:

Miss E., aged nineteen, Norwegian servant, was first seen by the writer on the occasion of a hemorrhage. Patient had been in this country about a year. Six weeks previous she began to have pain in the epigastrium after eating. At first it was not constant, but only occurred after eating food difficult of digestion. Later, however, she suffered pain after each meal, which she described as burning and paroxysmal in character, and extend-

ing through to the back. Meanwhile her menstrual periods ceased, and, becoming alarmed, she consulted a physician who treated her for her anemia. She had never vomited until the day she had the hemorrhage. The hemorrhage consisted of about ten ounces of partially coagulated blood. The patient was pale, anemic, and had marked tenderness over the epigastrium. The diagnosis of ulcer was now plain, and under rest in bed and liquid diet for four weeks she rapidly regained her strength, and was able at the end of that time to take solid food without distress. A year later this patient reported that she had no further trouble.

The following history from a patient under observation presents the chief symptoms characteristic of chronic ulcer.

J. G., aged forty-five, states that he has suffered more or less from stomach troubles for the last five years. There was no history of previous illness, and patient had always been in the best of health until the onset of the present trouble.

The chief symptom of which this patient suffers is pain coming on an hour or two after eating. He first experiences a sense of fullness in the epigastrium, which is soon followed by pain which is paroxysmal in character located in the epigastrium, rather circumscribed and extending through to the back. The pain at times assumes intense proportions, probably due to spasm of the pylorus, and no relief can be had until the patient empties the stomach by vomiting, which he voluntarily does after drinking warm water. His appetite is good; at times voracious, though he fears to eat, knowing that he will suffer for it. Even water causes pain at times. He is much benefited by a prolonged course of liquid diet, but as soon as he returns to solid food his symptoms return. As a result he is considerably reduced in weight; wears an anxious and worn look. Examination shows marked tenderness over epigastrium, especially in the pyloric region. Examination of stomach contents shows very marked increase of free hydrochloric acid. Patient assures me he can only be comfortable if he confines himself almost exclusively to light liquid diet. He has never vomited blood.

This patient has since been operated upon, and an old ulcer with considerable infiltration was present at the borders with narrowing of the pylorus from cicatricial contraction.

Lowry Arcade.

[Written for the MEDICAL BRIEF.]

Treatment of Tic Douloureux.

BY J. H. FORD, M. D.,

Professor of General Surgery in the State College of Physicians and Surgeons; Chief Surgeon of the C. C. C. & St. L. Ry. Indianapolis, Ind.

The treatment of tic douloureux has been so unsatisfactory in the past that any new method which promises results will certainly be of interest to the general profession.

The operation of resection of nerves has been only temporary in its result, the nerves regenerating and the pain returning in from one to three months. Operative procedures further have usually included trephining of the bones of the face and the removal of large sections of the nerves as they emerge from their foramen, but these operations have been unsatisfactory.

The operation for removal of the gasserian ganglion is one of great difficulty, and the mortality has been exceedingly high, so that only those cases in which life has become unbearable will have recourse to it, and they should go to some surgeon who has made this operation a special study.

The method of treatment of tic douloureux by injections of osmic acid is not a new one, having been used by different men for some twenty or twenty-five years, though in desultory or haphazard fashion. The perfecting of the operation is probably due to Bennett, of London, who, some eight or nine years ago, took up the study of the operation, and has obtained results which look very promising. Previous to Bennett's investigation, the injections were made into the adjacent tissues, with the result of temporarily relieving the patient, but the pain usually returned in a very few weeks or a few months. Bennett's method is to make an incision over the foramens of exit of the supraorbital, infraorbital and mental

nerves, dissect out and pick up the nerve, and, with a fine-pointed hypodermic needle, inject from five to ten drops of a two per cent solution of osmic acid. He reports cases which he operated on eight or nine years ago, without a recurrence.

In 1903, Dr. John B. Murphy, of Chicago, took up the Bennett method for tic douloureux, and has written several exhaustive articles upon the subject. His methods are the same as those of Bennett, dissecting up the nerve and injecting the nerve trunk. The writer, following Murphy's and Bennett's method, has, so far, treated some sixteen cases with uniformly good results. The first case treated was in January, 1904. This was a man, sixty-two years old, who had been a sufferer for seventeen years, with the last three years of intense and excruciating pain, confining him to the house and to his room. He was unable to touch the lips with a spoon or a cup, was unable to touch the beard of the lower lip with his fingers without causing paroxysms of pain. The nerves had become so tender that the opening of a door near him would cause a paroxysm. He had been unable to feed himself for eight or nine months, except by dribbling some fluid food from a spoon held some two or three inches from his mouth, with his head thrown backward. I operated on this man, January 16, 1904, about four o'clock in the afternoon, under general anesthesia, dissecting out the nerve trunks and injecting them, passing my needle into the trunk, and as far into the foramen as was practicable, and divulsing the trunk of the nerves with the injection. That same evening he was able to drink out of a cup readily, and eat with a spoon fluid food, and has had no recurrence of the pain since, some twenty-one months. A letter from him, a few days ago, states that he has gained forty-five pounds in weight and was, apparently, in as good health as he had been in a number of years; was able to go out in all kinds of weather and perform any reasonable amount of physical labor.

In the total number of cases I have had but one recurrence. This was a case where an ulceration of the wisdom tooth took place, and the pain recurred, not in the face, but along the dental canal, and in the teeth of the lower jaw. This case was relieved by trephining the ramus of the lower jaw, resecting the nerve and thoroughly injecting and divulsing the proximal end. The writer would not like to say that these people are permanently cured, but the success so far obtained has been gratifying, and at least promises a fair amount of immediate relief. The operation is, usually, easily performed without disfigurement and without special inconvenience to the patient, with the exception of taking general anesthesia. In comparison with other methods of treatment, especially that of removal of the gasserian ganglion, it is the writer's opinion that this method of treatment should be tried before proceeding to more extensive operations. I have, invariably, told my patients that I could not promise them anything for the future, and could only tell from past cases what would probably be the result.

I think it is important, in making this operation, to see that the technique is carefully followed out, the mere cutting down on the nerve and injecting the surrounding tissues, and, probably, not getting the injection into the nerve proper, will not do. In such cases there will surely be a recurrence, because, while the nerve will be temporarily disabled, regeneration will soon set in, and the pain will return. The nerve must be destroyed, and I think osmic acid will accomplish this, owing to the oxidization of the surrounding tissues, and the setting up of a degeneration of the nerve from starvation. Murphy, in his experiments upon dogs and other animals, was satisfied that the osmic acid set up an ascending degeneration in the nerve, and I am inclined to believe that this is true. If the degeneration should proceed sufficiently far as to prevent regeneration occurring, then the relief is permanent, but unless the operation is carefully and thoroughly done, and the nerve trunk itself is paralyzed, and injection placed within the trunk itself, the operation will be a failure.

The incisions in the face, as a rule, need never be over one-half inch in length, as the nerves are superficial and easily found. I have never had any sloughing of the soft parts, nor any trou-

ble whatever with the wounds. Usually, the face is healed in from three to five days, the patient being out of bed, usually, on the third day, and ready to leave the hospital within a week.

I have had some experience with the injection of a one per cent solution of osmic acid in sciatic rheumatism. This experience occurred some ten or eleven years ago, and I have since, occasionally, followed this treatment in traumatic injuries to the sciatic nerve. Results have been fairly good, but I believe that it is not safe to inject any strong solution of osmic acid into a motor nerve for fear of loss of function. In the injections of one per cent solution of osmic acid in the sciatic nerve no incisions were made, but, commencing just behind the trochanter major, a hypodermic needle would be driven in the direction of the sciatic nerve, and about ten drops of the solution injected. The patient would be put in bed and kept in absolute rest. The third day after, dropping down the limb about one and one-half inches, another injection would be made. This would be continued until five or six injections were made, extending down almost to the bifurcation of the sciatic. As stated before, this method has not always been successful, but in some cases the relief has been prompt and the cure, apparently, permanent. My first case was eleven years ago, a man who had received a traumatism to the sciatic nerve, just behind the trochanter major. He had been treated by his local physicians, had gone to several watering places and rheumatic "cures," and had failed to find relief. After injection of the osmic acid, and three weeks' rest in bed, he was, apparently, permanently relieved, because I have had him under observation ever since and there has been no return of the disease.

Newton-Claypool Building.

Find enclosed one dollar, for which extend my subscription to your valuable journal for another year.—N. T. Rice, M. D., Blaine, Ky.

[Written for the Medical Brief.]

Medical Testimony.

BY L. B. SAWYER, M. D.,
Professor of Medical Jurisprudence in the University Medical College.
Kansas City, Mo.

"Oh, wad some power the giftie gie us
To see oursel's as other see us!
It wad frae mony a blunder free us,
And foolish notion."
—Burns.

In this day of awakened American conscience, when, in the political world, men are exposing insurance graft; when railroad rebates are becoming a source of much investigation and attempted regulation; when the mammoth packing plants are coming in for a renovating; in fact, when long and continued abuses in so many lines of American life are being exposed, would it not be well for the medical profession to look to the abuses therein, and take some steps for their correction?

Much has been written in the medical world of the abuses by what is known as the professional witness or expert. He is almost as bad as he is painted, but, even in his prime, he is little in advance of the ordinary physician on the witness stand. Physicians, as a rule, are not untruthful; indeed, my experience has been that they are of as high a standard as men in any other walk of life, but many of them seem to have a peculiar conception of their duty when testifying in court. Unfortunately, the rule is that they take one side or the other of each case, and in their desire to convince the Court and jury of their views, go to great lengths in evading direct answers, and even greater in dodging the exact issue.

In a case in which I acted as the examiner, a surgeon who taught that branch of the science in one of our schools was the witness, and the following is an excerpt from his testimony.

The case was one in which a laborer had had his leg, at a point just above the ankle, caught between two twelve by twelve-inch timbers. One of these had rolled off a wagon and against his leg, bruising it, and several months after the accident his great toe was still flexed so that it turned directly down. The prin-

cipal question was whether or not the condition of the great toe was the result of the accident, and also as to the permanency of the injury.

Upon direct examination by the opposing counsel, the following is a part of the testimony:

Q. State whether or not, in your opinion, Doctor, there was any permanent results from that wound?

A. I don't see why there should be any. He claimed that his toes flexed, but I could not quite understand where the relation between that wound and that came in.

Q. Did you examine the toes?

A. Yes.

Q. How might the bend in his toes come?

A. Well, you see, you have distortion of the limbs, fingers, toes, etc., as the result of contraction of the body, as a rule, mostly; in this instance it would be the flexor, the flexor muscles; we have the flexors and the extensors that flex the fingers, toes and hands.

Q. Would this affect the toes in any way?

A. I couldn't see how it could.

Q. Do you say, then, in your opinion, there was no permanent injury resulting from this wound that you described?

After some objections and argument of counsel, the witness answered as follows:

A. I said before, I did not see where the connection came in, and why there should be any permanent injury from a slight skin wound.

On cross-examination by myself, the following is a reproduction of wisdom on the part of the witness:

Q. You said in your direct examination that the toes of that foot seemed flexed?

A. Yes.

Q. It was flexed? Doctor, what would cause that?

A. Well, we have those flexes in rheumatism, contraction of the muscle, various affections of that kind.

Q. Isn't it a fact that if the nerve supply of the muscles, the extensor muscles, that is the muscles that run along the tibia, if the nerve supply is cut off, that that will paralyze the extensor muscles, and will cause the toe to draw down?

A. Yes, sir.

Q. Isn't that the cause of that flexation, the nerve supply being cut off by reason of this bruised condition?

A. The nerve supply, the flexors, Doctor, would run on the outside, or the extensors would run on the outside of the leg, the flexors on the inside.

Q. Well, the limb was caught between two large timbers. Is it not probable that this bruised condition resulted in the destruction of the nerve that supplies the extensor muscles?

A. That might be a possibility; that, of course, would be conjectural, you know.

Q. Isn't it a strong probability?

A. Look, to-day you would arrive at that conclusion practically by an examination, you know.

Q. Well, you did not find any history in this case of rheumatism, did you?

A. No, sir.

Q. Then the probable cause of that is the destruction of the nerve leading to the muscle there?

A. May be an injury to the muscle.

Q. Well, if that is true, then, will this toe ever be straightened out; if that nerve is entirely destroyed, won't this toe remain crooked?

A. Well, I believe if that nerve is entirely destroyed you would have more of a contraction there of the toes.

Q. Can't you have destruction of part of a nerve and not the entire nerve?

A. That may be true, too, Doctor.

Q. Well, if the nerve is destroyed there, won't this toe always remain crooked?

A. Unless you get compensation there, and I am not sufficiently familiar with nervous diseases to tell you.

Q. How compensation; how can you get compensation when the nerve is entirely destroyed?

A. You can get a compensatory circulation there; I don't know how much compensation.

Q. Another branch of the nerve could divide and take root?

A. Yes, a nerve can be separated, Doctor, two inches, and you establish a connection between the nerve again.

Q. Now, if the only nerve to that muscle is destroyed, then you say that another nerve will branch out, could connect up with that muscle and provide for it?

A. No, I didn't say that, Doctor.

Q. What do you say?

A. I said that if there was a complete separation of the nerve that you could have the use of it, if it was an inch and a half or two inches long, sometimes by a contact, the same as an electrical contact.

Q. I understand, from pole to pole, you get a similar effect in there?

A. No, this nerve can be brought together, Doctor.

Q. By an operation?

A. Yes, sir. Now, I don't care about going into this question of nervous diseases, because I know very little about nerves; it is a specialty, you understand.

Q. You don't claim to be competent to say whether or not his toe will be crooked forever?

A. I would not say so.

Q. If this toe will be crooked forever then it would be permanently injured?

A. That depends upon how much difficulty it gives him in locomotion.

Q. Well, do you think a toe standing straight down this way (indicating) won't give him some trouble?

A. I don't know much about it, Doctor.

Shades of Standard Oil dodging! What manner of man is this; this expert who professed to possess knowledge? Stand up, juror, and tell me how the light has broken upon you, and how you are able to decide the question of injuries from such testimony.

In another case that I recall, the opposition doctor testified that the seat of intelligence in the brain of man was in the cerebellum. The injury was a fracture two inches above the eye and a little to the left of the median line. The company's physician, quick to perceive the trend of my cross-examination, placed the intelligence of man as far from the place of injury as possible, so that the mighty dollar, for which he was testifying, would be preserved.

Does the medical profession need the muck rake or shall its members investigate and try to see as others see, with the view in mind of correcting the abuses that are so patent to the world?

A physician recently said to me, "Expert testimony is a farce from any standpoint." This may be true, but no one has yet suggested a remedy that would appear to have much merit. Some have suggested a board of medical examiners to whom all legal disputes, in which a medical question is involved, should be referred. Other remedies, fully as impractical, have been suggested, but none has yet been offered that seems to meet the situation.

In the political world we find that publicity is being urged as the remedy in the management of great corporations in their internal affairs and their dealings with the public. This is resulting in much better and fairer treatment of the people generally on the part of the great corporations, and will soon result in more liberality on the part of the public toward them. In other words, the "square deal" is working out the great industrial problem, and it will work out all problems, whether they be of an industrial, economic or a medico-legal nature.

This remedy applied to the question of medical testimony should, in my opinion, be handled in this manner:

In every community where medical testimony is used to any great extent, there are well-established and active medical societies; let each such association have, as one of its principal standing committees, a committee on medical testimony. Let a fund be provided for the copying of medical evidence given by the members thereof, and other members of the profession. Let this committee furnish the most recent evidence obtainable to the association. It need not be used with a view of exposing the witness to ridicule, nor for criticism, but for the purpose of the education of the profession on the questions that are in litigation.

The result will be that physicians will be brought to know that the rash statements they may make to innocent (?) lawyers may be discussed by their brothers, and such statements as this, given by a prominent physician to me from the witness stand in answer to a question, will not be made:

Q. Doctor, tell the jury what part of the brain controls consciousness or intelligence?

A. The cerebellum.

Q. Where is the cerebellum located?

A. In the back part of the head.

Who will say that publicity will not check such practices, and is it not time for the profession to rise to the occasion and free itself, as a profession, from the odium of such acts on the part of its members?

New York Life Building.

[Written for the MEDICAL BRIEF.]

The Etiology and Diagnosis of Cancer.

BY J. FRANK CORBETT, M. D.,

Professor of Bacteriology Hamline University; Pathologist to City Hospital; Bacteriologist to Minneapolis Health Department. Minneapolis, Minn.

Since the days of Virchow, various attempts have been made to establish the parasitic origin of cancer. Plimmer described what he considered cancer parasites, and was the first to direct our attention to those structures commonly known as Plimmer's bodies. These are now looked upon as the result of secretory activity, and are common to all glandular structures. Busse, San Felice, Klein and Plimmer obtained torulæ, plants closely allied to yeast, from cancer. These for a time, confused with Plimmer's bodies and proclaimed to be the cause of cancer, were, later, shown to be one of the secondary infections occurring in neoplastic growths. The study of these organisms, therefore, did not clear the etiology of cancer, but gave us the pathology of a new condition, blastomycetic structures. We are still hoping for the discovery of a cancer parasite. Attempts have been made to grow these organisms on every conceivable variety of culture medium, and under every possible condition, using both natural and sterilized human fluids, under both artificial incubation and incubation of the living body. All such attempts have proven futile.

Quite recently Marx and Stickler have described certain invisible micro-organisms found in epithelioma contagiosum in birds. This is an epithelial tumor affecting the comb of chickens, and bears some relation to cancer. By using a Pasteur filter of non-glazed porcelain of such a degree of fineness as to exclude all common bacteria, they obtained a filtrate carrying these infectious elements. This filtrate to all bacteriological tests was sterile, yet contained the living infection, thus demonstrating epithelioma contagiosum to be due to an invisible micro-organism. It was thought, at first, that this might clear the etiology of cancer.

The same methods were applied by Jensen to rat carcinoma, the nearest analogue to human carcinoma. It was found that rat carcinoma did not contain any such infectious principle. W. R. Gaylord, in experimenting with mouse carcinoma, has been able to establish a certain immunity against cancer. This at once again suggested the parasitic origin of cancer and enormous possibilities in regard to a future antitoxin, but the results of Gaylord's experiments hardly warrant any such conclusion at the present time, and I will quote his closing statement in his last report: "Whatever the nature of this immunity, it does not appear to be cytolitic in its action. The histological picture indicating that the epithelial cells are, in some way, robbed of their power of distinct proliferation. An immune body is suggested as the cause." Molluscum contagiosum resembles beginning malignancy, but the etiology of molluscum contagiosum is as much an enigma as is that of cancer. Coccidium infection presents certain phases of epithelial proliferation that suggest the beginning of cancer. When we stop to consider the entire history of this condition, we find that coccidium produces the same degree of epithelial proliferation that we get in many other infections; that this proliferation does not continue, but is rapidly followed by a retrograde process, resulting in desquamation and degeneration.

J. N. Hyde says the skin is somewhat hypersensitive to light, and, as a result, we may have a train of sequences beginning with hyperemia and ending in cancer. In proof of this, he cites Xeroderma pigmentosum and cancer resulting from X-ray burns.

The weight of experimental evidence, at the present time, tends to show that cancer is not an infection, but a riotous proliferation of cells, incited by some stimulation, or free from their natural restraint; therefore, at the present time the treatment of cancer is purely surgical.

The successful cures at the present time have been limited to cancers on or near the surface. In the surgical treatment of early cancer on the surface much has been accomplished. The reason we say little has been done in cancer of the stomach, and to a lesser extent cancer of the breast, is due to the extreme difficulty of making an early diagnosis. The surgical technique of gastrectomy in the hands of Robson, Moynihan and Mayo has approached so nearly to the ideal that little more can be expected in this direction. However, the great problem confronting us is one of diagnosis.

The chemical and bacteriological examination of stomach contents, so highly lauded by our Vienna confreres, do not often enable a diagnosis to be made sufficiently early to be of any practical value. The results of these examinations, considered without strong clinical backing, often lead to grave errors in diagnosis; therefore, some other procedure must be adopted to reach a sufficiently early diagnosis. At the present time early exploration affords the only possibility. When we consider the fact that at the present time, the most of the cures of carcinoma by gastrectomy have resulted from exploratory examination made for some other condition, the importance of this is further emphasized. The problem is not entirely solved when we have the abdomen opened. We may encounter a callous ulcer of the stomach that, to all external appearances, is identical with carcinomatous ulcer. From a series of photographs in my possession, we might conclude that the difference between a malignant and non-malignant chronic ulcer was *nil*. On close inspection, however, we find that the base and edges of the malignant ulcer are generally smooth and densely infiltrated, while the same areas in a non-malignant ulcer are more or less ragged and eroded. Further, in malignancy, the walls of the stomach are usually thickened. In chronic ulcer the walls of the stomach are ordinarily thin. These differences do not always enable a diagnosis to be made; in that case a portion of the ulcer should be removed and examined by frozen section method during the operation; a positive diagnosis may be made in this manner in from six to ten minutes, and the operation proceed without material loss of time.

Malignancy lies in wait where we least expect. For instance, we may have a malignant appendix that differs in no outward respect from a thousand other non-malignant appendices. And, if routine pathological examinations were made of all appendices removed it would probably be found that a larger number were malignant than we can claim at the present time. As a notable illustration of this I quote the case of Dr. Harper. Had there been a pathological examination, it is probable that his life might have been saved.

In no place is the immediate pathological examination of tissues of more importance than in tumors of the breast. I have a remarkable series of cases illustrating this. Many of them, apparently benign, were, in fact, malignant; others apparently malignant, were, in reality, benign. The frozen sections and microscopical examination enabled a diagnosis to be made in all of these cases, with the results that some of the patients were operated upon early enough to obtain a complete cure, and others were saved an extensive and unnecessary operation.

Syndicate Block.

[Written for the MEDICAL BRIEF.]

Operations for Traumatic Epilepsy, With Report of a Case.

BY W. O. ROBERTS, M. D.,

Professor of Principles and Practice of Surgery and Clinical Surgery in the University of Louisville.
Louisville, Ky.

Epilepsy, following head injuries, may be divided into three classes, viz., those which are due to a peripheral nerve lesion in the scalp; those due to changes in the bones or dura at the site of injury or fracture of the skull, or adhesions of the dura to the bone; those due to injuries of the brain itself.

In the treatment of head injuries it must always be borne in mind that there are possible sequela, which are not apt to occur, however, except in cases of fracture.

Before the aseptic era there was a difference of opinion among surgeons as to the advisability of elevating depressed bone, which was not giving rise to symptoms. Now, however, there is practically unanimity of opinion in favor of it. Those opposed to the elevation of the depressed bone contended that it would be time enough to elevate it when the sequela appeared. Those who favored the operation contended it was better to use every means to prevent sequela, as operations for their cure were not very promising.

Great good may be expected from operative interference in traumatic epilepsy when it is undertaken early; but if it is deferred until the "habit" has become established, the results are very unsatisfactory.

The only cases in my own practice where cures were effected by operation have been those that were undertaken early. Still, I advise that the operation be undertaken, even in the old cases, as I believe it gives the only chance, slight as it may be, of relief. The operation of trephining, in itself, when done under a strict technique, is attended with very little risk, except in the neighborhood of one of the venous sinuses. When a sinus is opened there will be, of course, great hemorrhage. The best method of controlling this is by gauze packing. Therefore, before beginning the operation, be sure to have strips of gauze in readiness. It is astonishing how much gauze can be used in these cases without producing pressure symptoms. It is, of course, of vital importance to make a note of the strips used, and have their ends hanging out of the wound, so that there can be no possibility of a piece being overlooked. The removal of the gauze should begin at forty-eight hours. In order to guard against recurrence of hemorrhage, remove at each dressing only that portion of the gauze which is not adherent. It will likely take several days for it all to come away.

Case 1.—This patient was brought to me by Dr. J. K. F., with the following history: Age, thirty-five; married; occupation, cabinet maker; previous to four years ago his health had been good. Family history excellent. About four years ago this patient received a severe injury of the head, caused by a blow from a flying piece of timber while in his shop. He was knocked down by the force of the projecting timber and afterwards became so dizzy and nauseated that he was unable to continue his work. Following this he had headache, and, finally, the pain in his head became so severe that he had to go to bed. After suffering for nineteen weeks he was operated upon by Dr. J. M. Holloway; the operation consisted of raising a horseshoe flap of the scalp at the site of injury. About ten days after the operation the man returned to work. While his headaches were benefited, they did not entirely disappear, and, two years later, he began to have attacks of unconsciousness. These gradually became more frequent and violent. A few days before the patient came to the hospital, Dr. Freeman was called to the factory to see him, and found him in a convulsion. The Doctor stated that it was a typical epileptic seizure. After the convulsion had passed away, Dr. Freeman, in examining the man's head, made some pressure with his finger at the site of the old injury, and this brought on another spasm. The tender spot was one and one-half inches posterior to the external angular process, and one and three-quarter inches above the zygoma. At this point I exposed the bone by horseshoe incision, three and one-half inches broad. A large trephine was used. The button of bone removed was unusually thin and was adherent to the dura, which was found to be very vascular and thickened. In the removal of the button the anterior branch of the middle meningeal artery was divided. The hemorrhage, which was rather profuse, was controlled by pressure with strips of gauze, the ends of which were brought out at the angle of the wound. At the end of forty-eight hours, the dressings were changed, and this gauze packing was removed without any recurrence of hemorrhage. The patient has gotten along without any untoward symptom, and the wound is about healed. It is not only possible, but probable, that the thickened and adherent dura has been the cause of the epilepsy, and, if so, the operation will relieve him.

706 Chestnut Street.

[Written for the MEDICAL BRIEF.]

Diagnosis.

BY B. H. OGDEN, A. M., M. D.,

Professor of Obstetrics in the Homeopathic Medical College of the University of Minnesota.
St. Paul, Minn.

"The man who knows not that he knows not aught
He is a fool; no light shall ever reach him.
Who knows he knows not, and would fain be taught—
He is but simple; take thou him and teach him.
But whose knowing, knows not that he knows—
He is asleep; go thou to him and wake him.
The truly wise both knows and knows he knows—
Cleave thou to him and never more forsake him." —(*London Spectator.*

To be a skillful diagnostician is one of the most essential qualifications of a good physician or surgeon, and a proper understanding of the relationship of the diagnosis of disease or disturbed physical conditions, to their curative treatment, is imperative, not only to secure the best results for the individual patient, but to obtain any intelligent advancement in the treatment of disease. We do not merely want to know that certain symptoms have disappeared under the action of a remedy, but to know upon what basis they rest, for inasmuch as a given symptom or group of symptoms may arise from extremely varied lesions, can a certain remedy always remove them, irrespective of their causes? If not, upon what do the symptoms depend when a remedy can and does remove them? Is the physician competent to prescribe in accordance with the law of similars who has no knowledge of the significance of symptoms, who does not know that a given pain of sensation may be due to a variety of causes; who, when he has seen symptoms disappear under treatment, does not know whether they depended upon some grave hepatic lesion or some functional and ephemeral disturbance, and, consequently, can have no idea as to the role played by the remedy prescribed, in the removal of the symptoms? When a man who claims that diagnosis is of no practical value reports an almost miraculous cure with one dose of the fifty m. or ten drops of the tincture, how much credence is due his statement, how much right has it to a place in clinical homeopathy. Is a man holding such views in regard to diagnosis liable to be a skillful diagnostician? Have we, can we have, from such a source reliable evidence as to the curative power or sphere of a remedy? Is it not well, in addition to the oft-repeated question of "What cured?" to inquire "What was cured?" I have no sympathy with those who maintain that, for therapeutic purposes, a diagnosis is unnecessary, and prefer to select their remedy before having made this most important study of their case, nor can I join in the pleasure of those who "rejoice exceedingly" over a correct diagnosis, but do not deduce therefrom a method of treatment which shall cure or benefit the patient. The longer I practice medicine the more I am convinced that the "dear public" cares little or nothing for methods, provided only their cure is secured quickly, safely and pleasantly. They do not care whether this is brought about by the use of a large or small pill, or none at all. They do insist, however, that what is done be safely done and are quick to condemn any errors of commission or omission; they are unwilling to take medicine *ad nauseam* for conditions which can be relieved as well or better by pleasanter methods, or, on the other hand, to use what they term easy-going treatment, when more heroic is required. In short, there is an increasing demand for more than average intelligence and skill in physicians.

When sickness enters a household it is a matter of no small moment that a proper physician be selected, one who is not given to fads or committed to theories, one who is not always introducing new things or too slow in giving up the old, one who does not see in every simple disturbance the beginning of some terrible disorder, which he hopes to break up, or who, on the other hand, examines carelessly, and thus fails to recognize really serious disorders. He must be a man of strong principles and good judgment, thoroughly informed upon all methods of diagnosis and treatment, able to observe correctly and form logical conclusions, for upon these often hangs the issue of life and death. Medicine is not now and, perhaps, never will become an exact sci-

ence. "Two and two do not always make four in the reactions of the human body." Personal idiosyncrasies must be considered. What is one man's food may be another's poison. The same symptoms may result from widely different causes; there is, therefore, great danger that the physician's conclusions may be incorrect, because, in his syllogisms, he has constructed wrong premises. He must often be compelled to reason from probabilities. Here is the field for good judgment, and is very often the keystone of success or failure. As Butler, in his excellent work on diagnosis, says: "To, study and compare; to approach a case with a mind open to impressions and without preconceived or fixed ideas as to its nature based upon previous hearsay; to review and balance the evidence, from time to time, in the course of the disease; to question one's self—is there any other condition or disease which better explains these conditions than that which I have already assigned? These and other habits of thought make the difference between the man who sees without learning and he who learns by seeing." Some one has well said, "the safeguard of any truth lies in the standing invitation to the world to prove it false." So the safeguard against making or maintaining an error in diagnosis will be found in one's willingness to review and weigh evidence impartially, and change his opinion if need be.

What are some of the reasons why I attach so much importance to diagnosis?

In the first place, and I name it first because I believe it the most important, a correct diagnosis is necessary that we may be enabled to select from the various methods of treatment that which is best adapted to the cure of the patient or, perhaps, to combine measures which will give relief. The day is passed when any one system of cure is to be universally applicable to all forms of human ailment. "If this be treason, then make the most of it." The sooner the physician understands and makes the laity understand that in curing the sick the giving of drugs does not constitute all or the greater part of his duty, but that in properly selected cases drugs are essential, the sooner will he help to do away with the present disagreements among those who are treating the sick, and the too frequent distrust of the profession by the laity.

A proper differential diagnosis is essential at the very beginning, in order to understand the meaning of symptoms. A patient suffering from melancholia, with suicidal tendencies, may be simply suffering from malnutrition, and a proper administration of nourishment will restore his health; or his nervous system may be poisoned by a process of acute infection from long-retained fecal masses and a thorough house-cleaning is needed. Over-anxiousness and useless worry may have long been a habit, which a wise counsellor may overcome by suggestion. A sedentary life may be the prime causative factor, when massage and methods of manipulation will bring the best result. The sensitive, nervous system may have become so disordered that some drug as aurum, prescribed carefully from the homeopathic indications, may be necessary to establish a cure. Any one, or perhaps all of these methods, may be required in a given case. Shall we permit the undoubted value of aurum in such a mental state to be discredited, because we have failed to realize, also, the necessity of a cathartic? Or shall we, for one moment, permit any class of physicians to refuse us the right to use a cathartic because we also believe in the efficacy of aurum, prescribed on homeopathic principles?

Nothing makes me so righteously indignant as the slurring remarks made against the homeopathic physician who uses, occasionally, a cathartic or an opiate or an antacid, and I have been more than pleased to note how many of the profession have recognized our classical defintion of a homeopathic physician.

There are certain limitations to any method of treatment, certain lines within which all goes well, outside of which all is wrong. You can not cure pneumonia with a knife, you can not safely open an abscess with a drug. Shall the knife, therefore, rail at the drug or the drug at the knife?

The present era of medicine has been called anarchistic. Certainly it is an era of rebellion against the arrogant domination and assumption of all knowledge, which has too often characterized medi-

cal men. The extremes of this rebellion have resulted in fads, whose motto is "away with medicine, down with the physician." But, out of all this confusion, good to the human race will result, and it will come through a more careful classification and diagnosis of human disorders, so that each case will be individualized with reference to the kind of treatment best adapted to its cure.

Homeopathy has taught the world the grand lesson of individualizing different patients suffering from a common disease. but we must now go a step further, and individualize deviations from health, with reference to selecting the best method of restoring to health. Before considering at all the question of medication, or the form of treatment of any given case, the physician must determine as fully and as exhaustively as possible, not only in what respect his patient differs from normal, but why this difference exists. What are the abnormal conditions and what has produced them? This makes the thorough understanding of the etiology of disease an essential element of its diagnosis. Hahnemann recognized this, and emphatically stated that whenever possible the cause of disease should be removed. It was really this thought which led him to develop his theory of chronic diseases, *i. e.*, the endeavor to find an ulterior cause and remove it, and so he could, by a different class of remedies, overcome certain dyscrasias which served as an underlying cause of disease. With our later-day knowledge and ever-increasing information concerning the causes of disease, *tolle causam* has a far wider significance and importance than even in the days of Hahnemann, and makes necessary a much wider field of resource in treatment of disease than in his day. The germ theory of the origin of certain diseases, the poisoning of the system by various toxins, have naturally and most logically developed the use of antiseptics and antitoxins, and he who uses them is not following after the fleshpots of Egypt, as some have said, but rather is he following to its logical conclusion the advice of that master mind when he emphasized so strongly *tolle causam*. Remove the cause.

Very much of our recent advance in surgery is but the exponent of this principle, remove the cause. Peritonitis, as an idiopathic disease, is almost out of date, and is not now accepted by health officers as a cause of death unless qualified, because it is so generally recognized to be secondary to some other condition, such as appendicitis, perforation of the intestines, pus tubes, ectopic gestation, in which the removal of the cause means surgery. Thus, again is brought before us the extreme importance of the correct diagnosis of disease and its cause, that medical and surgical cases may be correctly differentiated. Whichever way you turn the question of diagnosis confronts you, and what a sense of comfort and assurance belongs to him who knows his ground, compared with him who only guesses.

What a misfortune it is, what a discredit comes to our profession when a child is treated for weeks or months for a supposed pneumonia, when the condition is an empyema, which can only be cured by resection of a rib and free drainage. Or, when a diagnosis of grip is made, when a more thorough examination, including blood analysis, would easily demonstrate typhoid fever. Perhaps, in the latter case, a good symptomatic prescriber would select the proper remedy, but what a small part of the treatment, as a whole, is represented by the giving of the correct remedy in such a case. Besides the necessity of determining what form of treatment is best adapted to a given case, a correct diagnosis is necessary that we may select the proper remedy from the totality of the symptoms.

Totality of symptoms are words glibly spoken, but when seriously and earnestly considered, they mean a great deal. Besides the subjective symptoms, detailed by the patient, there is that large and important class of symptoms termed objective, which are only discovered by a careful physical examination, and, finally, pathological conditions, tissue changes and derangement of the function of organs, as revealed by the microscope and test-tube; all of these go to make up the totality of the symptoms and a knowledge of them is important if you would make the best prescription. Not a day passes,

in my experience, that I do not find a correct diagnosis essential, the most essential factor in enabling me to make a correct prescription.

Again, diagnosis is necessary to enable one to anticipate and prevent disease or serious complications. In no place is this more evident than in the branch it is my privilege to teach at the State University. Because of a more thorough study of the methods of diagnosis and the relation of diagnosis to treatment, a new word has been applied to this method of dealing with abnormal conditions. Election in opposition to Compulsion. Because of the knowledge of renal insufficiency, we are not so often compelled to treat puerperal convulsions, but we elect its preventive treatment. By means of knowledge gained from pelvimetry, we are not compelled to resort to the major operations resulting from a contracted pelvis, but elect to produce a premature labor; or, if the case is first seen too late for this, we do not wait until the exigencies of the case force upon us a midnight operation, with poor surroundings and assistants, and upon a patient already exhausted, but we anticipate this necessity and elect our own favorable time and surroundings upon a patient carefully prepared, with far better chances of a favorable result.

Extending this same idea to general medicine, a correct diagnosis and consequent knowledge of the history of the disease; an understanding of the different temperaments and their morbific tenddencies, as detailed by Professor Comstock, will enable the physician to anticipate and prevent many serious complications and sequelæ. In all contagious and infectious diseases the necessity of diagnosis and prevention is so obvious that no remarks upon this line are necessary, and those who ignore this necessity are so plainly derelict in duty that even the "wayfaring man, though a fool," condemns them. Even Mrs. Eddy has been compelled by public sentiment to issue a "bull," forbidding healers to treat contagious diseases, thus recognizing their existence and the necessity of diagnostic ability.

I have briefly mentioned some of the reasons why I attach so much importance to diagnosis. I wish, in closing the paper, to refer briefly to some of the methods of making a diagnosis. The question now is not why, but how, diagnosticate? To answer this in full is to write a book. In my student days, "Da Costa on Diagnosis" was a well-thumbed book, but the subject has been so much enlarged since his day, and so many new and important discoveries in the line of laboratory methods have been made, that a recent work is a necessity. Recently, a well-informed person, but one inclined to magnify the weakness of the poor human mind, said to me: "A physician's diagnosis is nothing but a guess, liable to be good or bad." I rebel against such a statement. Diagnosis is not a guess, and such a statement and such a sentiment, I am sorry to admit it is fairly common, is false, all the more so and misleading because it is a distortion of a partial truth. It is true that complex conditions may exist which render a diagnosis, at first, impossible; and the physician is often unavoidably puzzled, but puzzles are not peculiar to the medical profession, the philosopher, the chemist, the scientist, the theologian, the business man, the mechanic, have similar difficulties. Who does not have his puzzle? The inability to make an absolute diagnosis in certain cases does not make all diagnoses mere guesswork, rather does it serve to emphasize its scientific accuracy. It is only he who is always cocksure of his diagnosis who does the guessing. Unfortunately, too many have yielded to the unreasoning demands of their patients that the nature of their malady should be named at once and have, therefore, fallen into error. We need still to sit at the feet of that greatest of ancient, if not of all philosophers, Socrates, and learn that the beginning of wisdom is the knowledge that we do not know. Who does not know and knows that he knows not, will learn, and is in the direct line of advancement to the unassailable position of him who knows that he knows. That, naturally, brings me to consider my first subdivision:

How to Make a Diagnosis—viz., make your mental attitude toward any subject of investigation one free from prejudice, receptive, logical. This judicial mind is a natural gift to some, others obtain it through training and education, and a

few seem incapable of its development. It is a pity that any of this latter class should enter the medical ranks. Occasionally, we are asked of what direct benefit to a physician is the time spent in the study of natural philosophy, geometry, trigonometry, and higher mathematics, analytical chemistry, logic, philosophy of history, political economy and similar studies? The answer is plain. These are the best known methods of teaching the mind the habit of accurate observation and of logical deductions therefrom. Before one is fitted even to begin the study of medicine, such an education is necessary. The more we study, and particularly the longer we practice medicine, the more alert our perceptions become, hence the saying, "An old practitioner for a diagnosis." The mental attitude of the expert detective following a clew, and of the physician in making a diagnosis. are identical. This is admirably illustrated in some of Dr. Conan Doyle's stories. How simple the snarl of symptoms or circumstances becomes when analyzed by the master mind! How confusing and impossible of solution for him if he allows some symptom or circumstance to become unduly magnified. We must know the relations of symptoms to each other in the order of cause and effect. It is folly to suppose that every condition, whether better or worse, which follows the administration of a drug, or of any other method of treatment, is the direct result thereof. Very many of our clinical reports are absolutely worthless because the mind of the reporter was never trained in the study of evidences. This is well illustrated by those who maintain that the paralysis which sometimes follows the use of antitoxin in diphtheria, is caused by the antitoxin, although before antitoxin was discovered or dreamed of, post-diphtheritic paralysis was of common occurrence. A patient of mine was suffering the agonizing pain of a middle-ear abscess formation. I urged the use of some opiate and prescribed the same, but, instead of taking it, a Christian Scientist was called. At first but little relief was obtained, but, *mirable dictu*, in four hours the pain suddenly left. Such was the story told me, and great was the Christian Scientist. Nothing was thought of the coincidence that the ear began to discharge pus, or of the more deplorable continuance of a stinking discharge, lasting three or four months, and the final destruction of the membrana tympani and the ossicles, with impaired hearing. Oh, no; this was the continuing effect of the scientist treatment in ridding the system of its impurities! Rdiculous in the extreme, and yet I have seen a report of a case of peritonsillar abscess very quickly relieved of swelling and soreness as of a boil, by a dose of medicine when the real benefit resulted from the spontaneous bursting of the abscess.

Let me repeat, the first essential in making a diagnosis is to have a well-balanced mind; then, with all the mental acumen he can muster, the physician proceeds to the details of obtaining the evidence upon which to base a diagnosis. First, the patient is asked to tell his story. Do not ask what is the matter, but say, "Now tell me all about yourself, in what way you feel ill, how and when your trouble began, and what have been the various symptoms, in their order." Then listen attentively to the recital, without making too many interruptions. Let the patient tell his story. Meanwhile, jot down on paper or in your mind points which need further elucidation. Do not allow a patient to say his kidneys pain him, or that he has liver disease, or use any of the set terms of medicine, without pointing out just what he means by them. Do not allow a patient to make your diagnosis, but do not ignore his theories, for he has, doubtless, given his trouble much thought, and they may be worth listening to. In this recital you are looking for facts, and after the patient has finished, you then put him through as rigid and keen an examination as ever befell a witness on the stand, that you may determine the relative importance of the facts elucidated, and their absolute accuracy. The patient may be too ill or too young to state his case, but you must depend upon the statement of others. In such cases your cross-examination should be all the more rigid for you do not know how accurate such observers are. Lastly, in obtaining evidence make your own observations and remember that a poor observer will never make a good diagnos-

tician, either of disease or the remedy for its cure. Under observation I include all the facts which can be elicited by the general appearance of the patient, in points of nutrition, diathesis, cachexia, posture and gait, appearance, color of skin and tongue and mucous membrane of the nose, mouth and throat, temperature and pulse, and all that is to be obtained by a thorough physical examination of all the organs of the body. Much of this is routine, and some of it in a given case may not be necessary; the time it takes is great, and after the physician becomes very busy he can not go over it so thoroughly, but by that time he should have become sufficiently acute to pick out those organs which need special examination. In this we need to be extremely cautious or every little while we will be discovered making a mistake, not because we do not know, but because we have not looked. There are certain routine methods of examination which should be followed, *e. g.*, always examine the throat of a child with fever. Besides the ordinary physical examination, we should avail ourselves of the knowledge to be obtained through modern laboratory methods, notably a thorough chemical and microscopic examination of the urine or a clinical examination of the blood, erythrocytes and leucocytes, their shape and size, the amount of hemoglobin, the plasmodium of malaria, the serum test of the Widal reaction in typhoid fever; also, the bacteriological examination of the sputum and secretions of the throat and the chemical examination of the stomach contents, after a test meal upon an empty stomach. The examination of the character of fluids obtained through diagnostic procedure. These and other methods which I have not the space to mention, show you how broad is the modern field for obtaining facts or evidence of disease. Having obtained all the evidence or facts, accurately, we are then ready to group them and make them into premises of a logical syllogism, and form our conclusions. In order to do this correctly, we must know thoroughly the meaning of the various facts. This is a study in itself and very important. The diagnostic value of the character and locality of pain is worth weeks of study; the meaning of dizziness, headache, vomiting, the amount and character of fever; the import of a chill, whether severe, prolonged, or simply chilliness; the meaning of the presence or absence of vocal resonance, vocal fremitus, and so *ad infinitum*.

In conclusion, let me say that while I can not emphasize too strongly, the value of diagnosis, it is not the physician's *summum bonum*, it is but the means to an end, viz., the prevention of disease, the relief of suffering, and the cure of the sick. We should give no ground for justification for those who would belittle diagnosis and claim that the diagnostician is never more pleased than when the *post-mortem* findings verify his statements.

It is true that Hahnemann and his contemporaries made brilliant cures without all this later-day knowledge, but how much more could have been accomplished by such minds had the diagnostic aids of to-day been theirs to command. Bigotry can never promote science and truth, and without these there can be no advance in medicine. To be able to discern truth and follow its teaching, this is the mark of mental balance, which I think is best exemplified by him who adds to his knowledge of medicine a special knowledge of homeopathic therapeutics. All that belongs to the science of medicine is his by inheritance, by tradition, by right.

Pittsburg Building.

[Written for the MEDICAL BRIEF.]

Nutrition.

BY RICHARD E. MCVEY, M. D.,
Professor of Skin and Venereal Diseases and Clinical Medicine in the Kansas Medical College.
Topeka, Kan.

The cell is the unit of animal and vegetable organizations, and nutrition is for the repair and maintenance of the cells during organic life. Nutrition and life are very closely associated. Life implies intelligence, so that behind all organized life there is an infinite intelligence which guides and directs both physical and chemical forces, as is manifested in the phenomena of life.

Protoplasm is the first form of living matter known; it is found in the sea and on the land. In the sea it produces all the forms of aquatic life; on the land all

the forms of life are evolved from it, from the ameba to man. In the vegetable it is a slimy, semi-fluid, cellular substance; in man it is the same semi-fluid substance. The laws of nutrition are the same in the plant and in the animal. The plant cell liberates force, as does the animal cell, and, like it, produces carbonic acid, but spends much less energy, and the phenomena predominant in it are those of assimilation. The plant seizes upon the carbonic acid and nitrogen as found in the air and soil, and unites them with water, thereby producing a nutritive molecule—principally a carbohydrate—which furnishes the animal with its nutrition; but, for the reduction of this nutritive molecule, or carbohydrate into a medium which can be appropriated as a nutriment for the cells of the animal tissues, it must undergo many physical and chemical changes.

In a unicellular being nutrition consists of four acts:

1. Endosmosis and the absorption of nutritive material.
2. A chemical change in the nutritive molecule absorbed by the cell.
3. A synthesis, a repair of waste, or tissue building.
4. Exosmosis of waste products.

All nutritive substances must be in a soluble or fluid condition to be absorbed by the walls of the tissues. In the higher forms of animal life an artifice is necessary for the solution of nutritive substances. The blood and lymph are the great media of exchange between the cells of the body and its food environment.

For the reduction of nutritive substances before their appropriation by the cells of the tissues, a whole system of glands and tubes is provided, with their ferments, which produce the necessary physical and chemical changes for cell nutrition. Each gland has a separate function, peculiar to itself, in the transformation of the various kinds of food elements. Some of these glands produce hydration and others dehydration, for the purpose of dialyzation by the tissues.

The solution of nutritive substances takes place in the intestinal canal. The secretions of the glands of the intestinal tube dilute and dissolve all the food elements. If left in this dilute condition they would pass through the tissues too rapidly, but as they pass through the intestinal walls all of the food products are dehydrated. The starches are saccharified; the albumins are peptonized, and the fats are partly emulsified, and partly decomposed into fatty acids and glycerine. After this dehydration, the peptones form new albumins, and the decomposed fats are recombined in the lymphatics, and especially in the liver, which arrests the fatty acids, a part of the peptones, and the sugar. Glucose is dehydrated and forms glycogen, which accumulates in large quantities in the various tissues, and especially in the muscles. The albuminous substances, after passing through the intestinal walls, enter the blood as serum albumin.

A typical cell is surrounded by a homogenous membrane, which contains a large amount of lymph, closely associated with the ultimate molecule of which the membrane is made up. This cell-membrane is a porous partition whose pores are filled with lymph, and which separates the cell contents from the surrounding media. The cell contents may be gaseous or fluid-like, more or less like the solids. The passage of nutritives from the exterior to the interior of the cell must be through this porous partition, and the nutritive elements must be so transformed as to be similar to the cell contents. The cells all have a selective affinity, and select from the pabulum those elements which are demanded for their repair and proliferation. For the perfect metabolism of food products a certain amount of oxygen must also enter the cell. In this metabolism a certain amount of energy is liberated, and there is also a certain amount of rejected or waste material. The chemical process concerned in the assimilation of food products by the cells, results in the formation of carbon dioxide, urea and creatin, and other crystalline bodies, which are no longer of use, and which must be removed from the cells. It has been stated that it is possible to find out, approximately, the nutritive state of a man by the amount of his excreta. "An adult voids, in twenty-four hours, two hundred and fifty grams of carbon and eighteen grams of nitrogen. He must ingest, therefore, each day, elements which will furnish the

same quantity of these two substances. He will obtain the eighteen grams of nitrogen by consuming five hundred grams of meat, but for the two hundred and fifty grams of carbon he will need two kilograms of meat. These figures show the necessity of a mixed alimentation. If vegetables are added to the diet, the ratio of maintenance is obtained by giving five parts of carbohydrates to one part of nitrogenous matter" (Rogers). When these proportions in alimentation are not observed, disturbances break out. Poor food in quality and quantity leads to the development of disease. If we take the carbohydrates in excess, too much glucose is absorbed. The cells of the tissues are unable to oxidize it all, and some of it may pass into the urine, and we have a temporary glycosuria. If the nitrogenous substances are in excess, they may be absorbed, but do not undergo the proper transformation into urea and other excrementitious substances.

Man is largely composed of water. A certain amount of water, or lymph, must always be present in the cells of the tissues for the purpose of perfect hydration of waste products. If these products are not hydrated they are not dialyzable, and when discharged into the tissues they set up irritation until such time as their hydration and dialyzation take place.

When there is a normal balance between the income and the outgo, the serum of the blood is not very toxic, nevertheless the tissues themselves and the serum are always more or less toxic. There is a constant variation between the toxins of the blood and those of the urine. When the toxins are diminished in the urine they are increased by accumulation in the serum. Ten different toxins have been found in the urine. The principal toxin is mineral potash, which, when retained in the serum, has a depressing effect upon the heart. There is also a convulsive toxin, which often lies behind uremia and epilepsy. Whether the resulting eclampsia will be fatal or not depends upon the amount of toxin in the serum, which may be estimated by injecting the serum of the affected person into the veins of a rabbit. The amount of the serum required to kill the rabbit will determine the toxicity. Ten c. c. of human serum (normal) are sufficient to kill one kilogram of rabbit (Roger). In persons who have weak or enfeebled action of the heart, foods containing large quantities of potash salts should be interdicted.

In pneumonia the toxicity of the urine is diminished, but on convalescence it is increased, which seems to indicate that the poison of pneumonia is eliminated through the kidney, and that the irritating element in the lung has been an undialyzable nitrogenous one. The fact of its elimination through the kidney is evidence of its nitrogenous character.

There are certain glands whose functions are probably the neutralization of toxins originating in the various tissues of the body, and chief among these may be mentioned the liver, the thyroid gland, and the suprarenal capsules. It is in the liver that the final dialyzation of the nitrogenous substances of disassimilation are transformed into urea, and the carbohydrates are rendered dialyzable. The function of the thyroid gland is said to be to regulate the circulation of the blood through the brain, and to neutralize the toxins coming from the brain. If the thyroid gland and the parathyroids are involved in disease, we have mental or cerebral apathy, myxodema and cretinism. The suprarenal capsules perform a very important function in nutrition. They neutralize the albuminoid toxins coming from the muscular system. In disease of these glands we have Addison's disease and melanemia, and other forms of pigmentation.

While nature has made provision for the neutralization and elimination of toxins formed within the organism, there is no special provision for the removal of toxins formed from micro-organisms, and this is especially true of the specific micro-organisms. Either the germs themselves, or their toxins, remain permanently, as seem to be the case in syphilis and tuberculosis. It may be, however, that the leucocytes devour some micro-organism and transform them into toxins which can be removed through the normal channels, but in the exanthemata, immunity is established through retention, permanently in the tissues of the toxins in the latent form.

Dr. Bouchard established that the urine contains numerous toxic substances, to which three sources may be assigned—alimentation, gastro-intestinal fermentation, and disassimilation. The digestive canal represents the principal apparatus for the production of auto-intoxication. The fermentation occurring there is exaggerated intoxication, under a great many circumstances. In other cases the toxins produced are not eliminated. In an attack of indigestion or dyspepsia an auto-intoxication is induced, attended by numerous disturbances, such as headache, weakness and general exhaustion.

We can recognize the power of the liver by several procedures. The hepatic cells are united, interdependent; when one is disturbed, the others are affected at the same time, and the liver fails to arrest the poisons; it no longer elaborates the bile, it no longer acts in a normal manner, it no longer acts on nitrogenous matter, the amount of urea is diminished or, at least, the proportion between the nitrogen of the urea, and to the total amount of nitrogen. Chief of all, the liver ceases to retain the carbohydrates, and sugar passes into the urine when the portal vein contains an excess of it after meals, and an alimentary glycosuria follows.

In order to test the function of the liver, the patient may be given, before breakfast, about half an ounce of syrup. If the liver is normal, no glucose will be found in the urine voided during the following four or five hours; if the glycogenic function is disturbed glucose will pass into the urine. Several conditions may interfere with the result. Although the liver may be insufficient, glycosuria may not appear, either because the intestinal absorption is hindered, or because the capacity of the cells for consuming sugar is increased, or, finally, because the renal emunctories are not performing their work normally.

If we study auto-genous poisons, we see that the living organism is always in danger of intoxication, even under normal conditions; poisons increase because new substances are produced by pathogenic agents; gastro-intestinal putrefaction is exaggerated and cellular disassimilation is more active, and often deviates from the normal type.

Many nutritive disturbances grow out of suboxidation. Our methods of civilization are responsible for this form of cell debility, which often leads to serious results. Among the very poor families food is deficient in both quantity and quality, and not in the proper proportion of albuminoids to carbohydrates. So we find in the children who are worked with insufficient sunlight, scrofula, enlarged glands, a poor quality of tissue, without resistance to inroads of the tubercle bacilli. Among the higher and more intelligent classes, we may have suboxidation from excesses of various kinds, excess in eating, irregular habits, loss of rest and sleep, and, among the more wealthy, insufficient exercise and over-eating. The balance between income and outgo is not maintained. The sugar in the muscles is suboxidized, and they have eczema or gout, which manifests itself as rheumatism in the muscles of the lumbar region, or, frequently, the heart muscle is crippled in its action. The suboxidized sugar enfeebles the circulation through the liver, and impairs its metabolic function in the final transformation of the crystallizable waste into urea, the normal diuretic, and when the antecedents of urea pass through the kidneys, chronic Bright's disease follows as a result.

Eating is only one factor in health; exercise and work, rest and sleep, the essentials. As to what and how much we shall eat must be left to that mental guiding power within each individual.

All kinds of vegetable alimentation represents a certain amount of vegetable life, which is transformed through the metabolic functions of the animal organism into animal life. But little is known as to the way in which one is transformed into the other, or as to the manner in which energy is set free and made use of as a life force.

To trace out the intermediate stages through which the constituents of the foods pass before reaching the final excretory products is accompanied with the greatest difficulty.

The manifestations of life are as varied as the different forms of individuals or plants or animals. All creation bears witness to its infinity and versatility, and inexhaustibility of resources.

625 Kansas Avenue.

[Written for the MEDICAL BRIEF.]

The Treatment of Exophthalmic Goitre.

BY ALFRED DE ROULET, B. S., M. D.,
Chicago, Ill.
Formerly Professor of Clinical Surgery and Diseases of Women in the Medical Department of Trinity University.

Generally speaking, the efficacy of the treatment of any disease is in an inverse ratio to the number of remedies or procedures advocated for its relief.

In the case of exophthalmic goitre, or Graves' disease, surgeons assure us that there is no real treatment aside from operation, but as to the particular operation indicated they differ widely. One school demands the extirpation of the greater part of the thyroid gland, another would cut off more or less completely the blood supply of the organ, while a third would remove the cervical sympathetics. Among physicians every effort is being made to develop a specific treatment. One feeds his patients on the milk of thyroidectomized goats, and reports wonderful results; another uses the serum of thyroidectomized sheep, and reports equally good results, while still others laud thyroid extract, thymus extract, etc. Among the older preparations belladonna, digitalis, opium, arsenic and the bromides are largely used.

As regards the operative treatment of exophthalmic goitre, we should bear in mind the fact that operations, no matter what their nature, often fail to cure this disease, and that the removal of the goitre often fails to relieve the symptoms. Again, an operation for exophthalmic goitre is much more dangerous than an operation for the removal of a simple parenchymatous goitre, the mortality rate being very high (fifteen per cent and upward), and sudden death during or shortly after operation painfully frequent. As a general rule an operation should not be attempted until medical treatment has utterly failed to give relief, or unless the symptoms have suddenly become urgent. Should operation be deemed advisable, a partial thyroidectomy, in my opinion, promises the best results. Clinically, it has been observed that in cases of Graves' disease where the goitre is very large its removal is accompanied by grave danger to the patient, and should the patient survive the operation the symptoms show but little amelioration. If the goitre is small the operation is seldom necessary. In hysterical patients, and the majority of these patients are hysterical, the operation rarely benefits the patient in the slightest degree.

The results of the non-operative treatment of exophthalmic goitre are considerably better than those attained by the surgeons. The principal objection to this form of treatment is the amount of time required, but if carried out with intelligence and perseverance good results will be attained. The course of treatment which I have found to be the most satisfactory consists of rest, diet, careful attention to hygienic surroundings, together with such medication as may be deemed advisable to control the various symptoms which may develop. Each individual case requires careful study, and the mental and physical peculiarities of the patient are often as important and should be studied as carefully as the more obvious pathological conditions.

In the treatment of mild cases of exophthalmic goitre little more than ordinary rational living is necessary. The patient should lead a quiet, regular life, avoiding excitement as much as possible, but doing a reasonable amount of work in a reasonable manner, practicing moderation in the pleasures of the table, going to bed early and getting up late. In severe cases a much more rigid regime is necessary before permanent improvement can be expected, and the patient should understand that good results can only be attained as the result of unremitting perseverance, and that the disease is one of sufficient gravity to make it worth his while to attend to the treatment.

Should the patient's circumstances permit, much benefit will be derived from a prolonged indulgence in the rest cure, but should such a course be impossible or impracticable, the following course of treatment will prove a very satisfactory substitute:

Given a patient with a well-marked case of Graves' disease, that is, with the

thyroid gland distinctly enlarged, a perceptible protrusion of the eye-balls, a pulse rate of one hundred and twenty or over, with nervousness, tremor, moist skin, etc. In such a case it is advisable to begin the treatment with from two to six weeks' rest in bed, followed by not less than twelve hours a day in bed for at least one year. Rest is much more likely to be taken if it does not demand too much of the patient's time during the day, consequently it is not a bad plan to instruct the patients to retire and rise at the same hour; that is, a patient going to bed at eight o'clock in the evening would get up next morning at eight. For the first few months, at least, eight hours a day should be spent in the open air regardless of the state of the weather, and as much as possible of this time should be spent in lounging in a hammock, etc. The old nursery jingle:

> "Never stand when you can sit,
> Never sit when you can lie."

is an excellent rule of conduct in exophthalmic goitre. There is practically no danger from exposure to the weather, as these patients are not susceptible to changes of temperature, and rarely take cold.

For the first week or two this aimless existence is likely to prove very tiresome to one of active habits, but in a remarkably short time even the most discontented will begin to realize and appreciate its advantages. Mental rest is as important as physical, consequently all occasions of excitement should be guarded against. Crowds, public meetings, theaters, clubs, etc., should be avoided. Occasional short visits from pleasant friends are usually beneficial, but visitors who wish to discuss their various troubles should be avoided. While reading in moderation is permissible, the character of the matter should be supervised, and all literature of an unduly exciting or emotional nature should be forbidden.

As the patient's condition improves a very moderate amount of exercise may be taken, preferably walking in the open air, but the exercise should never be carried to the point of fatigue. Physical culture exercises and systems should be given a wide berth.

The diet should be both full and varied, the object being to build up the patient's strength and to avoid any tendency toward flatulence or constipation. The food should be plainly cooked and consist of an abundance of meats, fats, as cream, butter and olive and cod-liver oil; cereals, such as well-cooked oat meal, cream of wheat or rice. The various patent breakfast nearfoods are of very little nutritive value. Fresh fruits and vegetables may be used freely. Tea, coffee and chocolate may be used in moderation. Sweets, pastry and made dishes should be used sparingly, if at all, while stimulants, as a rule, should be entirely withheld.

For the nervousness, which is an unpleasant symptom in many cases, codein gives the most satisfactory results. It may be given in doses of from one-quarter to one grain twice or three times a day, and may be continued for months without inconvenience or unpleasant effects. The best results are obtained when the drug is given for two or three weeks and then discontinued for a few days. Under its influence the nervousness is relieved, the pulse rate falls, the perspiration diminishes and the symptoms generally are much improved.

For the tachycardia digitalis and strophanthus have been highly recommended and in many cases are undoubtedly of great value. In emergencies cold may be applied directly to the thyroid or over the precordia with very satisfactory results in the way of controlling the tachycardia.

Electricity is sometimes of service in the treatment of exophthalmic goitre, though it is not much used at the present time. Two large flexible electrodes should be fitted to the front and back of the patient's neck, and connected with the secondary coil of a small battery, and enough current turned on to cause a slight tingling of the skin. This should be continued for not less than half an hour, and should be repeated twice or three times each week. The X-ray has also been used, and a number of cases have been reported where the goitre underwent a marked diminution after a

few exposures, the rays probably checking glandular activity and diminishing absorption by partially obliterating the lymphatics.

The use of the thyroid extract is based on the theory that all cases of exophthalmic goitre are not due to a hypersecretion of the thyroid gland, but that a certain proportion of cases are due to the elaboration of an abnormal secretion. According to this theory it is possible that supplying the normal secretion would prove beneficial, and in rare instances it does, apparently. As a rule, however, judging from the case reports at hand, it would seem that the administration of thyroid extract in such cases merely intensifies the existing symptoms. In the cases where good results are reported, the only advantages claimed are a slight diminution in the size of the goitre, and a more or less noticeable slowing of the pulse rate. The tremor and nervousness are not affected.

1013 Venetian Building.

[Written for the MEDICAL BRIEF.]

Renal Surgery—A Few Complications.

BY BENJ. MERRILL RICKETTS, M. D.,
Author of Surgery of the Heart and Lungs.
Cincinnati, Ohio.

Renal surgery has been so perfected and become so generally known that a discussion of the subject in its entirety would entail more time and space than is allotted to me. My object, therefore, is to present a few complications that have been encountered in approaching and operating upon the kidney viewed from a purely surgical standpoint.

These complications must of necessity bring the normal anatomy into question, as well as the anomalies likely to be encountered, not alone that of the soft and bony structures, but the position, size, shape and number of the kidneys and their ureters. It will not be necessary to consider the various incisions only as far as they concern the various cases in question.

Case 1. Nephrectomy.—White, male, aged twenty-seven; patient about five feet eleven inches tall, rather spare, with large, bony framework. Exploratory lumbar incision for renal calculi. The space between the twelfth rib and the crest of the ilium was long and narrow, so much so that the removal of the rib was seriously considered. It was with very great difficulty that the kidney was delivered from the incision, the pelvis opened and the ureters examined with a probe, with negative results kidney sutured and returned, with gauze drainage. Several months after, the patient, on his return from a summer resort noted for the efficacy of its medicinal waters in dissolving renal calculi, presented me with twenty-eight calculi of varying sizes, which he said had been passed. These, he assured me, he had obtained at two sittings within an interval of three weeks. A glance reveals their firmness, and indicates that they are not at all the variety found in the kidney or ureter. He has made a permanent recovery and is in absolute ignorance of my knowledge of his attempt to deceive me.

Case *2. Nephrectomy.*—White, female, aged sixteen, short of stature and rather fleshy; right lumbar incision, which revealed that space between twelfth rib and crest of ilium would only admit fingers, not being more than an inch in width. The twelfth rib was abnormally long and in removing it the pleural cavity was opened the entire length of the rib. The kidney was then delivered without further difficulty, and its pelvis opened for suspected abscess, which was not found. The ureter was sounded, with negative results, kidney sutured and returned to its position, and pleural cavity closed with catgut. Recovery prompt and uneventful. It is unusual for the pleura to extend to the twelfth rib. The fibers of the diaphragm normally touch those of the psoas and quadratus lumbrum muscles. The pleura more frequently extends to the eleventh rib, in the absence of the twelfth, and to the twelfth when the thirteenth is present, and seldom, if ever, extends to the thirteenth, which was not present in this case. In either event, the rib may be removed without opening the pleural cavity, if the soft structures and periosteum are incised along its outer surface, and the rib removed subperiosteally. This procedure should always be

resorted to when a rib is to be removed in approaching the kidney.

Case 3. Nephrectomy.—White, female, aged fifty-six, emaciated to a great degree, right lumbar incision for the purpose of removing enlarged tbc. kidney. An attempt was made to remove it retro-peritoneally by peeling the peritoneum down from the anterior belly wall. A rent in the peritoneum caused the peritoneal cavity to be opened and the kidney was then removed, through a combined incision. Recovery uneventful.

Case 4. Nephrectomy.—White, male, aged twenty-eight, condition fair; right lumbar incision for removal of enlarged tbc. kidney, the silk ligatures which were applied to the renal artery, vein and ureter, became detached immediately after removal of the kidney, necessitating the application of a right-angled forceps, which was allowed to remain in position four days, during which time the urine was free from pus. After removal of the forceps pyuria began and persisted for several weeks, the amount of pus gradually disappearing until, at the end of three months, the urine was normal.

This demonstrates that drainage of the perirenal space may occur through the ureter, which remains patulous after the operation.

Fourth Street and Broadway.

[Written for the MEDICAL BRIEF.]

Flat Foot.

BY ALBERT SILVERSTEIN, M. D.,

Professor Physiology Colorado College of Dental Surgery; Attending Orthopedic Surgeon to the Mercy Hospital.
Denver, Colo.

Of the many pathological conditions frequently seen by the general practitioner; and erroneously diagnosed, if not completely overlooked, none takes precedence over that condition commonly known as flat foot. Flat foot is of so common occurrence, its pathology is so well understood, though varied, the results of treatment so satisfactory, that this state of affairs is truly deplorable.

The patient complains of pain in the heel, the ankle, the inner border of the foot, great toe, the muscles of the calf, the knee, or even the hip. The busy practitioner, burdened, perhaps, by an overlarge office practice, sees the patient, notes these symptoms in a hurried, casual way, attributes them to rheumatism, prescribes salicylates and what not, and another flat-footed individual plods his weary way. Increased deformity is added to what may have been merely foot-strain in the first place. A curable case has become well-nigh incurable, and the medical profession is again justly liable to well-deserved censure.

And how can this be obviated? By the very simple procedure of exposing the foot of the patient. Prominent, bulging, internal malleoli and lowering of the arch, marked abduction of the great toe, or loss of the normal degree of dorsal flexion and plantar flexion of the foot are such obvious symptoms that a mistake in diagnosis can hardly occur. True it is that the symptomatology is not always in keeping with the manifest deformity. In other words, the foot may present a marked lowering of the arch, with inward rolling, and yet present few, if any symptoms. And the reverse is likewise true that a foot presenting few signs of deformity may have a well-marked symptomatology.

The special signs of diagnostic importance, from the standpoint of physical signs, is the marked eversion of the foot in walking. This everted gait is brought about by the inward rolling of the malleoli. Another marked physical sign is the loss of muscular power, as manifested in the diminished degree of dorsal and plantar flexion of the foot.

The etiology of this condition may be summed up in one statement: That any factor which tends to diminish the muscular power of the foot may cause flat foot. Such factors may be traumatic or postural. A great increase in the weight borne by the foot may cause this condition. This increase in weight may be actual, such as occurs in people who put on a great deal of fat, or it may be relative, such as occurs in athletes, jumpers especially. But by far the most common cause is postural. By this I mean more particularly a cramping of the foot, brought about by improper shoes.

The normal foot, as seen in an infant, or in an adult who has never worn a shoe, presents a triangular appearance of the sole, the apex of the triangle is formed by the heel, the base by the distal extremities of the toes. The base is slightly convex, the apex of the convexity being formed by the distal extremity of the second toe. The axis of the great toe, prolonged backward, passes through the heel. Now, one of the first effects of an improperly-made shoe is to cramp the normal foot. This cramping is manifested by an abduction of the great toe, so that the axis of the great toe prolonged backward strikes far to the inner side of the heel. Second, the muscles of the foot, from disuse, lose their power. The normal arch of the foot is maintained by the normal muscle power of the foot; this being lost, a relatively greater weight is superimposed upon the foot than can be borne, consequently the arch becomes lowered; with a lowering of the arch the muscles further lose their power; the peroneal group, the gastrocnemii, are affected, and thus a vicious circle is established.

For treatment of this condition, mechanical support to the deformed foot is practically all that is necessary. This mechanical support is best afforded by means of the foot plate made from highly-tempered steel and molded upon a plaster cast of the foot. The foot plate should be worn as long as it is required, but no longer. Additional wearing of the plate, beyond the time necessary as indicated by the symptoms, is simply an additional cause of harm. With the foot plate a shoe should be worn fitting the normal contour of the foot, a shoe which does not cramp the foot as a whole or any of its parts. Of great importance in treating this condition is a consideration of the muscles themselves. These should be massaged by passive motion, employed so as to restore lost tone. A cure having been established, the plate should be discarded, and properly-fitting shoes worn thereafter.

Among other conditions which might be mistaken for flat foot, is arthritis deformans. This need only be mentioned to be dispensed with. In arthritis deformans there is absolute limitation of motion at the ankle joint, caused by anchylosis. Arthritis deformans presents in other joints of the body. In flat foot, on the other hand, the loss of motion at the ankle joint is relative. Rheumatism, for which this condition is so often confused, can be readily differentiated by its very transient character and history of the case. The mere fact that the pain in flat foot may be referred to the knee or hip, should not mislead one, for an examination of the foot itself will nearly always disclose the true character of the condition .

Mack Block.

[Written for the MEDICAL BRIEF.]

Acne Vulgaris (Simplex).

BY P. T. KILGOUR, M. D.,

Professor of Practice and Dermatology in the Pulte Medical College; Dermatologist to the Protestant Home for the Friendless and Foundlings. Cincinnati, Ohio.

What more common or distressing skin disease among adolescents than acne vulgaris! The very nature of this disease and the time of its appearance make it difficult of treatment, notwithstanding the intense desire of the possessor to be rid of it.

Appearing at puberty, as a rule, when the human plant is in its juiciest stage, and activities heretofore dormant come into being, it is not to be wondered at that patients seek any and every means to be rid of its unsightliness, in many cases making use of unwise means to this end, and adding to, instead of relieving, the trouble.

In the majority of cases, the disease is due to greatly increased activity of the sebaceous glands, in common with the general glandular activity of the years intervening between puberty and complete physical development. It is but a step from physiological hyperemia of the sebaceous glands to congestion, especially if some influence is brought to bear to interfere with the function of the gland, either of a mechanical or reflex character. Comedones (black-heads), by plugging the outlet of the gland, bring about changes within the gland which result in the formation of first, a papule, and,

later, a pustule, and this repeated gives us the well-known picture of the pimply face. It may exist, also, without the comedone. The reflexes of gastro-intestinal disorders, flatulent dyspepsia, constipation, genito-urinary diseases, masturbation and, occasionally, affections of the nose and throat, all are to be reckoned with as causative factors. Idiosyncrasy is also to be borne in mind. The old truism that "What is one man's food is another man's poison," holds true here, with the skin bearing the brunt of the battle. The simplest kind of food may, in the so-disposed, cause congestion of the face, and thus keep up a continuous disturbance in its glands.

In no disease affecting the skin is it so important to get at the cause as in this one. Many times the correction of the diet will be all sufficient. In the plethoric the avoidance of animal foods and a substitution of vegetable diet will prove helpful. In the spare, scrawny and anemic an increase of nitrogenous food of the animal kind may be required.

Remembering that the skin is a very important organ of excretion, it is necessary to aid this function by the generous use of water internally and externally.

If water alone, externally, will not suffice to maintain cleanliness, the addition of soap, plain or medicated, and the use of such solvents as salicylic acid, boracic acid saturated solution hot, or equal parts of saturated solution of boric acid cold, and alcohol, are useful. In the sluggish and chronic type of this disease, occurring in thick-skinned persons, decided stimulation is called for, which is obtained by the use of Hebra's "Oriental lotion," or a milder formula is:

℞ Hydrar. Bichlorid .....8 grains.
Spr. Vini, Rect.....2 drachms.
Aquæ Dest.....4 ounces.

Ammonium sulpho ichthyolate soap and lotion are useful in many cases requiring mild stimulation, as also are resorcin (grains, ten to fifty to ounce) and beta-naphthol (grains, ten to thirty to ounce). The strength of ammonium sulpho-ichthyolate, as wisely suggested by Dearborn, should be graduated according to the degree of the disease, the texture of the skin, and, I might add, the toleration of the skin to this form of stimulation.

A popular treatment is the use of very hot water applied to the face until hyperemia is induced. It is best applied upon retiring at night, but should be preceded by the cleansing of the oily secretions from the face by means of good, pure soap and water, and followed by gentle massage of the face and the application of an antiseptic ointment of boracic acid, twenty to forty grains to the ounce of cold cream. These applications are valuable where the skin is sensitive. Like any other good thing, this practice of applying hot water may be overdone, and the very object of its use be defeated. If, after its use for a number of times, beneficial results are not obtained, it is well to suspend the treatment for two or three nights, and then resume. In very pronounced cases, where much pustulation is present, and the acne pustules show a tendency to coalesce and form sebaceous abscesses, the acne lance is indicated. This relieves the follicles of pus and congested blood, and will prevent the unsightly scarring that results from spontaneous rupture. Thorough cleansing with antiseptic soaps and carbolic acid, boracic acid, or salicylic acid lotions, should follow the use of the lance.

Hamilton Avenue, College Hill.

[Written for the MEDICAL BRIEF.]

After-Care of the Parturient.

BY F. ABBOTT, M. D.,

Professor of Pathology and Hematology in the Denver Homeopathic Medical College.
Denver, Colo.

With the completion of the third stage of labor, our work as obstetricians is far from finished. At this time we have largely in our hands the future of two people. Gynecologists claim that if the two commonest consequences of parturition—injuries to the birth canal and retro-displacement of the uterus—were promptly recognized and properly treated one-third or more, numerically speaking, of the diseases of women would disappear from private practice. If this is true, there is the greatest room for improvement in this particular, and we can all draw conclusions from the number of

women we treat whose ill-health dates from confinement.

The after-care of the parturient, as practiced in the great lying-in hospital of Chrobak and Pischochek, is worthy of consideration. As the placenta is delivered the uterus is grasped firmly and all clots expelled. An attendant, who is trained in the work, massages the uterus for three hours. If the contractions are good, very slight massage with the tips of the fingers upon the fundus is sufficient to keep the uterus firmly contracted. If the uterus is inclined to be flabby, more vigorous massage is required. There is an art in massaging the uterus in a manner to keep the contractions good, and not be severe upon the patient. The fundus of the uterus can be easily reached by the tips of the fingers through the depression of the umbilicus, and pressure alone from that point is often all that is necessary to keep the uterus firm. If it relaxes, a gentle rotary movement will, usually, cause contractions. Obstinate cases may require more vigorous massage with both hands. The success of this treatment lies in keeping the hand constantly on the uterus. Just taking the hand away for an instant may allow the uterus to become so relaxed that it will be difficult to bring it down to the same small, hard mass again. I have carried out this method with primiparæ with most satisfactory results. When the contractions are as firm as they should be, there will be absolutely no clots, in the majority of cases, and less flow than is usual when massage is not practiced, although during the manipulation considerable blood will be expelled, particularly during the first hour. In a multipara, with a previous subinvoluted uterus, one can not expect as good results. In primiparæ I believe it is always possible to avoid displacements if the vaginal walls and the perineum are repaired, in case of lacerations, and the patient is not allowed to get up too soon, never before the tenth day, at least. In multiparæ the results are so favorable that one who has made a practice of massaging the uterus will always advocate it.

As to the use of the abdominal bandage there is a difference of opinion. When contractions are good, it is not necessary. Women who have worn them in previous confinements generally want them, and to some they give a sense of comfort. If there has been a tendency to hemorrhage the patient is safer with a bandage. When the patient gets upon her feet an abdominal supporter should be worn for a few weeks.

The bladder should never be permitted to become distended (if necessary, resorting to the use of a catheter), as it will crowd the uterus into an abnormal position.

During the first twelve hours the patient should lie upon her back, then she can lie on either side; if the uterus falls to one side she should lie on the other until it is again in the center. Later, if a tendency to retro-displacement is discovered, the patient should lie as much as possible face downward, until this is corrected.

The problem of greatest importance is the recognition and immediate repair of the perineum and vaginal walls. I believe that the skilled obstetrician can save many lacerations, especially of the perineum, and yet find there are lacerations in the vaginal walls, in spite of the greatest care, and these seemingly insignicant tears, if left, would not only be a foci for infection, but would cause a weakening of the vaginal walls, leading to prolapse, cystocele or rectocele. Very few physicians will leave a lacerated perineum without, at least, attempting an immediate repair, but many leave the vaginal lacerations to heal without repairing, when the perineum is intact. I have seen a case where a slight tear in the labia minora gave the greatest discomfort, where one stitch in time would have saved more than nine of annoyance.

If the laceration is not extensive, the repairing can usually be done without anesthesia, if done early. If there is delay, caused by slow delivery of the placenta, or other causes, an anesthetic is usually necessary. If the laceration includes the sphincter muscle, it should be faced as a surgical procedure. A physician should give the anesthetic. The work should be done on a table, with plenty of assistance, a good light and sufficient time taken for a thorough operation.

If conditions are such that an immediate repair is impossible, it is better to repair on the following day than to leave indefinitely. In two cases I have repaired in about twenty-four hours with perfect results. Last January a primipara, after a slow labor, was delivered without any visible laceration, the perineum was intact, and the vaginal walls, as far as could be seen, were intact. Later, the labia began to swell. The patient was of a very nervous temperament, and it would not do to mention laceration to her. The following day she was put under an anesthetic, presumably, to be examined. I found a jagged tear in the form of a semicircle, entirely above the pubic bones, going deep into the tissues; there were so many little radiations from it that it required eight stitches. She made an uneventful recovery. The vaginal walls are in perfect condition, and the patient told me recently that she never felt better in her life. Had the laceration been left to heal, I know she would have been a sufferer to-day. In repairing lacerations, if the parts are accurately coapted, and the stitches taken deep enough, the union will be perfect, usually by first intention. Of course, surgical asepsis must be strictly maintained. It is my practice to keep the stitches covered with dry dressing, usually boric acid, having it renewed every time the napkin is changed.

As to douches, there is also a difference of opinion. I never have any bad results from their use. I always see that the bag is sterilized, use boiled water in a glass douche tube. The douche adds to the patient's comfort, and, in reliable hands, never does any damage.

A source of infection which is easily overlooked, is blood spots. Unless the physician is watchful the nurse, if inexperienced, will often cover up a spot with a pad, instead of removing the soiled linen, especially if the supply is limited. If blood is allowed to decompose anywhere about the bed, there will be myriads of bacteria, which may easily infect the patient.

If there is one point more than another concerning which the doctor must be firm, it is upon absolute quiet for the patient. It is sometimes, seemingly, impossible to keep all the friends, relatives and neighbors out of the sick room, or, better, the house. Nervousness will often cause an elevation of temperature during the puerperium.

The chief purpose of this paper will be fulfilled if it emphasizes the importance of repairing all vaginal lacerations, however slight.

Temple Court.

[Written for the MEDICAL BRIEF.]

The Autocracy of Modern Medicine—A Circumspective View.

BY W. H. SMITH, A. B., M. D.,

Physician Local Board of Health; Surgeon C. R. I. & P. Ry., Etc.
Shell Rock, Ia.

In the request for an article at this time, there evidently existed in the minds of those soliciting same a desire to have the subject one with reference especially to the action of the State Board of Medical Examiners summoning me to appear before them to show reason why my certificate of practice should not be revoked for incompetency—*i. e.*, we differed in diagnosis.

As the facts are stated by the Court in so far as the case proceeded, it is, at this time, unnecessary for me to enter into the "equity" of same, but will, it having close connection with the subject, give it a few thoughts along the line of a circumspective view of modern medicine.

A very important decision, however, involving the right of a State Board of Medical Examiners to annul the certificate of a licensed physician and prevent him from practicing his profession was handed down by Judge A. H. McVey in the District Court of Iowa, for Polk County, "No. 13,826 Equity."

The Court granted a permanent injunction and delivered a very able opinion in which he says: "I am clearly of the opinion upon the whole case under the authorities that the right to practice medicine once being conferred and exercised for a number of years by a physician, is not only a right, but is the exercise of a liberty which amounts to property, and that the holder of such a certificate can not be deprived of his right to

practice medicine without due process of law."

"Under the statute had the board summarily proceeded and filed charges that the plaintiff was incompetent, his rights would have been forever foreclosed, because no appeal is provided by the statute, a condition of law which is repugnant to the genius of our institutions, and exposes the citizen to the charge of being deprived of liberty and property without due process of law." "In other words, where a statute reposes in a board or court the right to dispose of the rights, liberty or property of a citizen, fails to provide for a constitutional trial, the act is unconstitutional."

There is an element in human nature to which "imposition" appeals with a great deal of force. This characteristic is nowhere more noticeable than in the realm of medicine.

Some long-haired freak from the medical Hub, who, by a special dispensation of nature, is able to place himself before the public, immediately wins both an artistic and a financial success as one of the most remarkable phenomenons that ever emerged from the classic shades of the world.

Several years ago the conclusion was reached in this country that the time had come to protect the public, through legislation, from this growing evil, and a licensing board was established whose duty it was to inquire into the qualifications of practitioners of medicine.

Let us suppose for a moment that this object has been accomplished, and let us look at what the consequences of its accomplishments are producing.

The licensing board, combined with its auxiliary board the State Board of Health, whose personnel is made up of the same individuals, is becoming a powerful, and therefore a formidable body.

It can be powerful for good or for evil.

In which direction its influence will be cast will depend entirely upon the character of the few men who from time to time must inevitably control its destinies.

If they are honest, earnest and competent, its influence will make for good as regards both scientific medicine and medical policy, as well as including the rights and liberty of the individual.

If they, or a majority of them—or even a minority of them, if that minority should consist of men of dominating force—lack any of these three essential qualities, the board will become a menace to the public, and therefore to the profession.

Instead of safeguarding the people from incompetents and a few contagious diseases and bettering sanitary conditions, they now strive to supervise all sources from which life may be endangered.

"They make war tooth and nail on all sources through which tuberculosis and all similar diseases are disseminated with as much vigor as if they were small-pox or yellow fever."

"They give to the public antitoxin to combat diphtheria. They run a modern laboratory and make analyses for all physicians *free of charge*. They inspect localities where disease is reported to prevail. They disinfect all places where contagion is supposed to exist, and give free baths to all who apply."

This being the goal toward which they are striving, the fact becomes demonstrated beyond a doubt how entirely and arbitrarily despotic can be made the power assumed in the execution of their duties. There is a fear existing, and with good cause, that the object of this overelaborate body is not merely to aid the legislative purpose of better intellectual attainments and to assist in the procuring of improved conditions of public health and safety, but rather to govern everything connected with the health situation of the universe. It is not governing which the public stands in need of today, but co-operation toward honest intellectual development.

"At present we are in danger of too much interference of the licensing body with the teaching body."

If we were to ponder over the words of some of the greatest medical philosophers that have ever ornamented our medical profession, we would view in their jealous, anxious and thoughtful eye the threatened honor of our teaching body—the medical school—separate, but governed by these Procrustean methods that now seem to be in the ascendancy, opening the way to some of the most unrea-

sonable, unscientific possibilities that can be imposed upon the individual and public.

Through a process of continued delegation of authority the power must ultimately resolve itself into a dictatorship or an oligarchy in effect, if not in name, and arbitrary insults may be continued so long as the people do not give an intelligent and efficient attention—through legislators—to the laws of disease, not only the modes by which the disease is propagated, but to the duration of the dangerous activity. In other words, all real progress towards the control of disease dangerous to the public health must come through the enlightenment of the people, safeguarded by a system of differential diagnosis.

When you hear some loud-mouthed, saintly individual shouting: Danger, danger! beware of danger! keep a sharp eye on him; he generally has some selfish and spiteful motive.

"Just think of some of these intellectual hypocrites who devote their little brains to some unreasonable sophistical chimera they themselves do not know any more about, than a chimpanzee knows about the principles of this government."

There is a tone of optimism in this which seems to have foundation in the various quarantine conflicts of the past few years.

When the State is repeatedly aroused, and its citizens kept awake by the disgraceful howlings over the outbreak of some contagious disease, characterized either through ignorance or a desire to distort facts and ignore all the vital questions of honesty and integrity, it should not be expected that the public will accept the outcry without question of its genuineness.

When, as in the year 1904, an eruptive disease appeared in this county, and several physicians saw and diagnosed the disease as chicken-pox, a member of the State Board of Health, notified of the existence of the dispase, came into the locality, diagnosed the disease small-pox, rode rough-shod over the local board with assumed power to remove them from office, deposed the local health officer, took full charge of the situation, appointed another health officer and instituted a system called quarantine.

The local authorities sought legal and medical advice. Several affidavits and opinions were procured from competent medical men. Among these, one in his own characteristic handwriting given from description of facts, we herein quote. This opinion was given but a few days before his death, and almost the last day in which he was at his office:

THE DESCRIPTION.

"We are having in this locality quite a sensation over an eruptive disease, and, as usual, a difference of opinion, and for our satisfaction will give you a brief description requesting your opinion in diagnosis.

"The disease has existed for some months over quite a territory; is contagious; exceedingly mild; in reality, no one needing medical attention; attacking adults in many cases who seem to have the disease more severe than among children.

"In the commencement is a slight indisposition, headache, pains in the back and body; little fever, etc. Within twenty-four or thirty-six hours the appearance of a rash; distinct, macular; not accompanied with hard base; no areola; each twenty-four hours for three or four days a succession of the eruption, which from the first passes through an irregular course into blebs, conical in shape, filled with a serum, clear in many; others of yellowish color, which, in same course, gradually settle down into dry, dark scabs or scales, involves epidermis, and usually leaving no scar or mark, and working alike in both vaccinated and unvaccinated persons, etc.

"Disease is diagnosed as small-pox by a member of State Board of Health.

"If, from above description, you can give an opinion, please do so upon paper hereto attached. [Signed.]

THE OPINION.

"CHICAGO, ILL., May 31, 1904.
"65 Randolph street.

"From the description given in your accompanying letter I should regard the disease described as simply *varicella*, chicken-pox.

"Your description does not include any *diagnostic* symptoms of *small-pox*, or any of its modifications.

"From the uniform mildness of the disease, it seems to require only simple hygienic treatment.

"Yours truly,

"N. S. DAVIS."

(Underlines are his.)

Suffice it to say that after recovery I vaccinated about thirty patients with the results usually procured in unprotected persons.

General Grant used to tell this story to point a moral. It seems it might point the same moral today:

"The General told how his whole camp was kept awake nights by the outrageous howling of coyotes, and they were satisfied that millions of the natural-born agitators were just over the hill. A band of venturesome soldiers rode out to get a shot, and found just three coyotes, each on his own knoll, contributing all the noise."

There is no kind of disease so hard to diagnose as certain classes of skin diseases. It is almost impossible to determine from the eruption what the exact trouble is. It is necessary to inquire into all the facts pertaining to each individual disease. Is the disease epidemic? Is there a history of exposure? When was the patient taken sick? What were the preliminary manifestations? are all questions that should be asked and carefully weighed before the eruption itself is taken into consideration.

These questions satisfactorily answered, the careful physician will not then be in too great haste in giving a positive diagnosis.

It is just this safeguard that the people stand in need of today.

The professor of diseases of children in one of our leading medical schools in a recent lecture to young physicians had this to say: "The public should be taught that scarlet fever is a highly contagious disease; that it is dangerous to life, and that it is a very frequent cause of deafness and other organic and functional defects.

"Do not be too hasty in forming a diagnosis, but wait until a sufficient number of distinctive symptoms have shown themselves before you pass an opinion as to the nature of the disease.

"Every case, mild or severe, should be isolated. In other words, if called in early do not be afraid to tell the friends that sufficient time has not elapsed to give a positive diagnosis, and that you may have to repeat your visits several times before you can do so. When you are certain your diagnosis is correct, and you have a case of scarlet fever, strict quarantine should be established.

"When a physician or a number of physicians see fit to diagnose a disease, and when this opinion is reached without giving due, accurate and intelligent consideration to the nature of all conditions and results, it is imposing, unfair, and is deserving of censure on the part of all citizens; and worse when they, from neglect or otherwise, fail to heed these teachings and defend their mistakes with the idea 'that it is many fold better to make a mistake in ordering quarantine established in disease' the character of which is not exactly known than to neglect to quarantine a case where contagious disease exists, is a travesty on justice, a mockery upon liberty, and a reflection upon the intelligence of our American institutions."

In an honest attempt to carefully analyze the legitimate rights of all parties interested, if intelligently and properly executed, it might almost seem possible to relieve the American people from often having to tamely submit to some brazen imposition which manifests the apotheosis of impudence in the name of the State.

This may hit some of our social and professional blunderers pretty hard, but to every person who has an eye-piece to see and a head-piece to think, it must be apparent that we can not do otherwise and tell the truth.

The longer one studies the scholastic and political sides of medical education the more forcibly he becomes convinced of the necessity of formulating a scheme of study, purely ideal, and then work to adjust it to the requirements of the body politic without attention to facts and circumstances, or the probable consequence of a measure with a view to a correct course of conduct.

There is, however, every reason to feel gratified at the substantial progress that

has been made in our medical schools, and upon this progress, coupled with a careful compilation of facts, it supplies a basis upon which can be erected a rational and substantial tombstone.

The *International Journal of Surgery*—editorial article—notices chances for improvement in our teaching body. It says: "Primarily, the function of the medical school is to fit men to practice medicine—for this too much attention has been paid to laboratory work—even to the extent of encouraging experimental research on the part of the undergradute."

"Medical colleges would do well to reinforce their course by devoting more time to emergency medicine and surgery, and professional economics and customs."

We should no longer hold medicine a mystery, but we should take mankind into our confidence and strive to educate the masses along the lines of truth as we know it.

I am aware that disappointment will be your lot if something is not said relative to the long list of diseases extending from Alpha to Omega in which I was charged with incompetency. Yet nothing we can say in truth or in malice can dim the splendors or make sensible, useful and beneficial the value of these devotees to some humane institution like a home for honest politicians or a college for domestic servants.

The summons was legal, and therefore compulsory. We made it as funny as possible, but essentially it had to be. If our ideas of fun should see alteration, the inquiry unfolds natural results in giving the masses enlightenment of a life condescendingly deprived of equal rights and justice.

The ideal arrangement for this subject—as per *Collier's*—would be one paragraph of words, one of emotion, one of history and one of poetry, to which we plead incompetency, not being able to furnish all the ingredients, although something does fuse into action a quotation:

"A bellicose bug met a taciturn worm on a twig most alarmingly narrow.
Screamed the bug: 'Let me pass; you impertinent germ!'
And began to show fight, but the other stood firm
And silently faced him, with never a squirm.
On a twig just below sat a sparrow.
Thus they stood; eye to eye, this belligerent pair;
But the worm's gaze would chill any marrow.
A few passes he made, then, with mesmeric stare,
With a hyper-compulsory, hypnotic glare.
He made that poor bug, minus bellicose air.
Drop down to the welcoming sparrow."

It is immaterial whether these acts were due to single-minded devotion to the public good, or were simply the crafty use of a worthy object for purely selfish purposes.

I have the consciousness of feeling, as I look into the motives of the case, that the only selfishness that I have is the desire to do right, to be a benefactor of my race, and I sincerely hope that my labors may be blessed so far as they tend to relieve suffering humanity, to advance the cause of science and to elevate the "principles" of medicine.

"It is a glorious thing to feel that you are above the dross and glitter of pageantry.

"Money is trash, and may be blown away by the wind.

"Honors are evanescent and may be snatched by another.

"Even reputation may be tarnished by the slanderous tongue of an envious villain, but the proud consciousness of rectitude, coupled with benevolence, lives in the heart of its possessor, and is as immortal as life itself."

[Written for the MEDICAL BRIEF.]

Practical Notes.

BY DR. A. ROSE,
New York City.

One of the most valuable practical suggestions of recent years is that of Dr. Stephen Harnsberger, of Catlett, Virginia.

Potassium Bicarbonate in Colds and Influenza.—Given early it will, in nearly every instance, abort a cold very effectually and promptly. Well borne by both elderly and weak persons; in fact, adaptable to all ages. The dose for an adult is thirty grains in a cup of hot milk every four hours during the day, and no other diet for forty-eight hours but hot milk. When milk is not well borne, or

readily taken, administer the remedy with a glass of water, and allow only liquid diet. The action of potassium bicarbonate is assisted by a cathartic, and none is more suitable than compound licorice powder. *It is the most effective of all remedies in case of influenza.*

When to give Quinine and when Methylene Blue in Malaria.—Methylene blue will have a curative effect in those forms of malaria in which the plasma is most developed, and quinine in those in which the nuclei are the most developed and the plasma more or less wanting. The form which is most decidedly affected by methylene blue is that of the crescents, which consist almost entirely of plasma, while on the other hand juvenile forms of plasmodia which have very little plasma remain unaffected by methylene blue, but are very sensitive to quinine. The full-grown parasites, the principal part of which consists almost entirely of plasma, are indifferent to quinine but most sensitive to methylene blue; they are completely destroyed by it. There exists, as we see, an antagonism between the action of methylene blue and quinine; the latter destroys the nucleus, the former the plasma. In acute malaria quinine will be indicated, in chronic malaria methylene blue. The dose of the latter is a one-grain pill every two hours, *i. e.*, six pills daily, to be continued for one week. The effect of methylene blue in chronic malaria is as striking as that of quinine in acute malaria.

To Relieve Itching in Urticaria.—Perhaps the most reliable remedy against this and some other forms of itching is salicylic acid, one drachm dissolved in six ounces of alcohol. Apply to the itching skin by means of cotton. There is at first a little, but hardly unpleasant smarting, followed by relief.

Vomiting.—Two drops of tincture of iodine in a tablespoonful of ice water, every two hours, will control vomiting in most cases. For vomiting in pregnancy: Chloroform and tincture of iodine equal parts; of this mixture five drops in cold water every two hours.

Chronic Gastritis.—Bismuthi subnitrici, magnesia calcinatæ, equal parts; well mixed. Of this mixture a teaspoonful in water half an hour before each meal. Magnesia will dissolve the slime, the characteristic feature of chronic gastritis; bismuth acts as a mild antiseptic. As a rule, within a week there is marked improvement. The first benefit generally noted is the disappearance of gas in the stomach, the correction of raising phlegm, especially in the morning, the regularity of defecation and general change from depression to sereneness. No matter how well the patient feels, the powder should be continued for about six weeks. Patient should be advised to eat slowly; to masticate the food well.

[Written for the MEDICAL BRIEF.]

Medical Wonders and Medical Blunders—A Story of Facts.

BY M. J. RODERMUND, M. D.,
Milwaukee, Wis.

CHAPTER XXV.

SCIENCE AND ART.

Science is classified knowledge. The word itself in its etymology signifies what we *know* about a particular subject. Whenever we learn two facts about any subject and we differentiate and classify those two facts, we have a science of that subject. Thus we have the science of astronomy containing the classified facts that intelligent observers have learned concerning the stars, the science of mathematics, a classification of knowledge concerning numbers; and we have the science of medicine, consisting of facts that intelligent observers have collected concerning the physiology of man, the etiology and pathology of disease classified and reduced to rules to serve a practical purpose. I make these few remarks in order to draw a distinction between a science and an art.

The science is the classified knowledge; the art is the process of turning that knowledge to practical account. The two words, "Science" and "Art" are usually used synonymously in medicine, and their broad distinction should be established to avoid confusion. The science of astronomy never discovered a star; the science of arithmetic never computed the value of a fraction. The sciences are merely cold, hard facts, piled up in crys-

tallized principles and rules. *Art* is the warm, living application of these principles and rules to serve the needs of mankind.

So with the science and the art of medicine. The science is as absolute as mathematics. In its principles there are no fallacies. To its rules there are absolutely no exceptions. The *Art* of medicine, on the other hand, is estimative, and the results of its application will depend on the graces, gifts and abilities of him who seeks to apply it. To illustrate, the process of digesting the foods and their appropriation to the wants of the body is an absolute science. In its principles there are no failures or exceptions. But the application of these foods is an *Art*, and is only estimative, and it depends often, if not largely, upon the knowledge of the individual to properly apply the proper kind and quantity of foods best adapted to him or herself, according to their constitution, environment and vocation. This article closes the first year of the series of my articles published in the BRIEF. In these articles I have confined myself to the science, postulates, blunders and crimes of the profession. If I should continue the series, which at present looks very doubtful, I will confine myself to the Art of Medicine; in other words, the practical application in the care and treatment of disease, as well as to their efficacy in the maintaining of health and a long life.

Physiology and pathology, as well as the action and effects of our environments or atmospheric conditions upon our physiology, and in the production of pathology (disease), is an absolute science. The adapting of ourselves to these two great sciences for the maintaining of health and long life, or the prevention and cure of disease, is estimative. In other words, it is an *Art*. As before stated, physiology is an exact science, yet it differs mathematically in each individual, this is especially true among civilized nations; hence the necessity of each person to have more knowledge upon the subject in order to receive its full benefits. In some directions physiology has made great strides, yet is of very little practical value compared to what it should be if it were not for the fact that the "key" to this magnificent science has been completely ignored by the medical profession. I refer to mental physiology, or, rather, phrenology. Phrenology, practically applied, is an art, and is estimative, and in its delineations includes the whole physiology of man. The meaning of the word phrenology is at present misconstrued as to its full meaning, similar as the word artery means air-pipe, but in reality is a blood vessel. The word phrenology in an early day, by the laity was used as bumpology of the brain. The fact is that the art of phrenology is the applied "art" of the "science" of the brain, and is the most essential key to the perfect understanding of physiology. But you may ask me, "Is phrenology sufficiently developed to be of practical value to mankind?" I answer unhesitatingly that phrenology is the reigning queen of all sciences, and is of greater value to the human race than all other sciences combined, because humanity is worth more than all the stars that scintillate in the heavens. It is greater than mathematics, because humanity is better than numbers; greater than geology and zoology as humanity is above the rocks and animals, and greater than all combined because phrenology bears upon her resplendent crown the jewels of knowledge, virtue, morality, culture, temperance, wealth and progress, and is pregnant with possibilities of good beyond the present comprehension of the human imagination. Let me make my meaning clear. The function of the stomach and intestines is called "digestion," yet digestion, to be perfect, depends much upon the perfect or balanced relation of the digestive organs to other organs and functions of the body. This same illustration holds good with the brain. What we have called mind or intelligence, is simply the functions of the brain. The brain is adapted to perform these functions, just as the stomach and intestines are adapted to perform the functions of digestion. Just as good digestion depends upon the correlative relation to other functions does the correlative relation of the brain and its capabilities of performing its functions depend very much upon all other functions of the brain (intelligence), and on the other hand, whatever affects intelligence affects the body. The

body is like a harp of a thousand strings, manifesting its intelligence by different degrees of vibration. If either the musician or his instrument is out of order the music will be discordant. The neglect of medical men and many laymen to comprehend the full meaning and the inseparable relation of these laws is undoubtedly the reason that they have not comprehended the fact that phrenology is one of the most important branches of physiology, and without it have ignored the most glorious and important branch of the medical curriculum. Without this knowledge the physician is handicapped to explain the cause of many ailments. Without this knowledge the layman is unable to govern his acts correctly in order not to lay the foundation for a chronic and incurable disease. For instance, thousands of people, especially in this country, are suffering with indigestion or dyspepsia, and are being treated for such, but without the slightest benefit, because of the fact that nothing is really the matter with the stomach pathologically; but their unbalanced physiology is such that the brain capacity overshadows the digestive and circulatory, and attracts the blood to the active brain that the stomach needs to perform its normal function (digestion). It is apparent that medicine will do these patients no good, but that the proper advice to the patient as to its cause, and then to have the patient correct this error, is the only remedy. Such a patient, as a rule, is by phrenologists called a mental temperament, and proportionately deficient in the vital temperament. A practical knowledge of phrenology will tell the physician at a glance that this patient will complain of some trouble of the digestive organs, and without this knowedge will likely dope him with medicines for months and years until some incurable condition has developed, while the knowledge of phrenology would have prevented this error and given the patient a lease of life of ten to thirty years longer. The proper advice would only give the doctor one fee, where the present method gives him regular fees for months and years, besides being of no benefit, and ultimately costing the patient his life. This reminds me of a man who, for several years, was treated for dyspepsia, when, in reality, it was the over-working of a brain with a deficient vital temperament. He gradually grew worse, took to his bed, and his wife called in the family physician and another specialist in consultation. Both physicians decided that they could not do anything for him, and that he had but a few hours to live, and so informed the wife and the patient. The man then asked the attending physician how much his bill was, as he wished to settle all his accounts before he died. The doctor said: "Six hundred and fifty dollars." The consulting physician replied to the same question: "One hundred and fifty dollars." The physicians were paid in full. The patient then said to one of the physicians: "Doctor, take hold of my hand," and to the other, "Take hold of my other hand." All remained silent for a time. when one of the physicians inquired why he wanted them to keep hold of his hands. "Well, I will tell you," said the patient; "seeing I must die, I want to die like Christ, my master, between two thieves."

Granting, then, that the American people have the great desire of maintaining health, if they only knew it it goes without saying that all real knowledge of nature pertaining to the subjects of health and disease must be proportionately detrimental to the financial end of the medical profession. But doctors and disease are on the increase every year. There must be something wrong somewhere. Where is the wrong? It is simply this: The medical profession are continually springing false theories and practicing deceptions and frauds of the grossest nature upon the public which misleads the public and keeps them going and acting in the wrong direction instead of the right.

Just stop and think what it would do for the public health, the millions of lives it would save and the millions of dollars it would save the public if the simple principles explained in the former chapters were continually kept before the public. Teach these simple natural principles thoroughly in the public schools. Educate the young that marriages must be based upon the principles of phrenology and physiology; that this is the *only*

method of stamping out consumption (barring the sporadic cases). Teach the public that each one is responsible for his own diseases, and that no one can contract a disease by contagion; that quarantine is useless and dangerous, and that germs are the cause of diseases is all tommyrot. Teach the public that our prominent surgeons are the greatest criminals on earth. Teach them that the cases that need an operation could be mostly avoided if properly attended to in the beginning. Teach the public that the atmospheric actions and the acts of the individual, singly or combined, produce all diseases man is heir to. Explain in detail how these two causes produce the various forms of disease. Teach them how simple most all diseases can be treated by themselves by very simple methods in the beginning of feeling ill. Teach them the cause of epidemics and that the eruptive diseases are the least dangerous, the easiest to be prevented and the simplest to be treated of all other diseases. Teach them that small-pox and scarlet fever are the accumulations of the identical poisons that the body is eliminating every moment of our lives. The public should be convinced of the fact that the medical profession consists of the greatest ignorance, pretenders and frauds according to nature's methods of doing things, and that very few deserve the respect and confidence of the American people.

Now, I do not want to be misunderstood, and that I am only writing for the sake of finding fault; far from it, as I prefer to throw bouquets, as I am a physician myself. My early experience soon taught me that most of those wonderful theories and the good we could accomplish taught us at medical college was a farce, and injurious when practically applied at the bedside. To say the least, I was a much disappointed man. I made a vow that I would devote all my spare time to investigation, observation and experiments, and, if possible, find the cause of disease. I believed that disease was contagious as well as many other fallacies. I would be called to a family and would find several cases of diphtheria or scarlet fever. It struck me, How is it possible for me to prevent carrying these diseases to other families, and especially to my own family. I could conceive of no method that if disease was contagious how it could possibly be prevented. Yet I found that I could not carry a disease to another, and that epidemics came and went in spite of any of the damphool regulations. I was determined to know something about this subject. The previous chapters have explained the result of the twenty years of work along these lines. The attitude of the profession has only been a repetition of the black and disgraceful history of their past. In the past they have fought tooth and nail each and every time any fact or truth that would overthrow established false and injurious theories which they had in various ways put before the public, and have the public accept them as facts. Not only that the medical profession have, in each instance, directly or indirectly ruined every man who presented absolute proof by the laws of nature that overthrow their established fallacies and atrocities. This was true of Dr. Harvey, who discovered the circulation of the blood. It was true in the overthrowing of bleeding and blistering. It was true of Dr. Thompson, and many others. But let any man come out with a theory or method that will be a success from a mercenary standpoint, and he will be lauded and praised, and his name made famous and immortal. The public have repeatedly asked me, Why, Doctor, don't you publish those principles of yours in the medical journals, and let the profession investigate and discuss them; that surely physicians are not all dishonest? What has the past year demonstrated? In closing, I take this opportunity to thank the Editor of the BRIEF for the broad, liberal and tolerant spirit in publishing the first half of the series of my articles; the other half will likely not be written at present. I have no other object in view but to improve and benefit the medical profession, to expose the rascals and to give to the public what they have for centuries been craving for, but have never received; that is, the cause, prevention and treatment of disease.

330 Harmon Street.

[Written for the MEDICAL BRIEF.]

Is Beauty Its Own Excuse for Being?

BY AXEL EMIL GIBSON, M. D.,
Los Angeles, Cal.

"The guaranty for true religious honesty lies in our worship of beauty—beauty as an abstract principle—independent of all the circumstances resulting from it. On the other hand we have utility, which is always modified by, and dependent on events."
—MME. STAEL VON HOLSTEIN.

One of the questions which for ages have agitated the minds of men relatively to life and progress is found in the meaning and character accredited to the manifestation of beauty. Has beauty value and significance in and through itself, or does it serve as means for the accomplishment of utilitarian ends?

And as beauty, whenever made manifest in objects and processes of the concrete world, through the genius and ingenuity of man, gives rise to art, it follows that the same question facing beauty and its relations to utility, with equal force and logic confronts art in its relation to motives of morality and civic virtue. Thus, we raise the question: Is art for art's sake or for the general progress sake?

In this, as in all questions of life and growth, the final appeal must be directed to the infinite, ever-present, ever-active energy which at once impels and directs the movements of universal evolution. It is to this mystic face behind the veil of the concrete and changeable, from which life and consciousness, as causative factors, unfold their spontaneous impulses in terms of progressive nature, that the serious inquirer must look for a solution to his problem. This face of the world-sphinx looks at us from every aspect of natural evolution.

The first glance at nature reveals the fact that throughout all her kingdoms the lines of the beautiful and the lines of the useful unfold in diametrically opposite directions. The formula—unvarying and fundamental—expressed in all animate and inanimate nature reads: The more imperative a factor is in natural or social evolution, the less marked is the beauty of its features or the processes of unfoldment.

Thus, at the very base of the evolutionary ladder—the mineral kingdom—we are met by the striking contrasts between the zone of the beautiful and the zone of the useful. For what is more useful in the mineral world than the granite and the iron, and at the same time less beautiful? And thence, upward or downward—according to our consideration of the beautiful or the useful—along the entire gamut of the mineral world, wherein the dazzling exhibit of the gold, the diamond and so-called precious stones, we meet so much beauty and charm with comparatively so little usefulness to man.

And this principle operates with equal force in the very soil we walk on, which, with its priceless value for the material progress of humanity is most unattractive, and never elicits a single thought or feeling of the sublime and beautiful in existence. Thus, in the humble granite, the clay and the sand, etc., despite their ugliness of form, emptiness of expression and cheapness of price, we meet qualities of usefulness so fundamental that the commonwealth for its commercial and structural integrity absolutely depends on their employment.

In the vegetable kingdom, the same inverse relation obtains between the useful and the beautiful. Its signature remains invariably the same; the more beauty the less usefulness. The ugliness of the potato, the carrot, the beet, turnip, cabbage, the grains and grasses—the prime factors for the support of the organized world—is as striking as the beauty of the lily, the rose, the chrysanthemum, the pansy, etc., coupled with the utter invaluableness of the latter in the vital economy of nature. The apex of beauty coincides, with very few exceptions, with the apex of the concretely useless.

The parallelism thus traced in the mineral and vegetable continues with unabated force in the animal kingdom. In proportion to their domestic usefulness, the animals exhibit angularity of form, gracelessness in movement and correspondingly physiological and anatomical imperfections. The domesticated beasts of burden—the plug horse, pack-mule and ass, the milk cow and the hog—so indis-

possible for the material progress of the commonwealth—do certainly not appeal to our sense of the beautiful, while the wild animals, unburdened by any service to culture, exhibit features and qualities of highest grace and beauty. We need only refer to the zebra, the antelope, the tiger, the lion and eagle, etc., and the striking contrast between their fascinating but relatively useless beauty and charm, and the useful but homely and awkward hen, turkey, goose, duck, etc.

These lines of contrast between the beautiful and the useful can be pursued into the region of the highest kingdom, to the human mind itself, in the work which genius and intelligence have wrought in art and culture. For, is not a poem by far a greater work of beauty than a scientific lecture or a technical invention? Or do we ever find in the elaborate and laborious statements of general philosophy the pathos of life and the vision of beauty which exalt us in some great classic work of fiction? And even in art's own realm of being, is not the fairest, the sweetest, the most divine and most beautiful of them all—the art of music—also the one who, in natural evolution and in the concrete progress of the world, shows the least appreciable sign of usefulness.

Nor is man himself, as a type in evolution, exempt from this universal rule. The men and women who serve as vital props in the social structure of the commonwealth—the manual workers, producers and wage earners—do not, can not, express the refinement of touch, dignity of movement and beauty of form which we meet with in the privileged laborers in the vineyard of the beautiful—the representatives of genius and inspiration—the artist, the poet and the seer. For what are the groupings of human anatomy, especially in the delicately-poised ligaments of the face, but the action of thought mirrored in the features and facial expression of the thinker—an expression which, with no exception, rises in sublimity and beauty with the spiritual ascendancy of the subject under contemplation. Who can fail to observe the difference between the keen-edged, aggressive, often even gross expression of the scientist, especially if his researches are gauged by dominating materialistic motives—and the lofty, sublime touch, the gentleness of demeanor, and unassuming yet dignified poise of the poet and artist. From the man with the hoe—the alleged representative of the useful, the concrete and indispensable phase of the prosperous commonwealth—up to the man with the ecstatic vision, the man with his mind suspended in the empyrean, the practically inappreciable man, whose entire struggle, dream and hope, motive and destiny are enveloped in the life of beauty—we observe a constant elevation of the individual type toward the abstractly beautiful and soul-inspiring. Evidently, the spiritual ascent of life is rising *pari-passu* with the ascent of the beautiful, in inverse relation to the useful.

And even among the men of genius themselves, in definite proportion to their divorcement from utilitarian pursuits, we find this rule in operation. Thus the genius of constructive intelligence whose mental center of gravity lies in the useful and materially progressive, does not possess in his character and expression that overwhelming cohesive force of the ideal, the resistless power of the divine to stir the soul into emotions of at once courage and sweetness, of mountain-firm resolve and forbearing tenderness; the power to lift the whole nature of the responsive beholder into regions of soaring, sense-withering beauty. For even genius has its sliding scale of beauty, on which it descends or ascends in proportion to the dominant tendency of the mind towards the constructive or inspiring; the concrete or abstract; the intellectual or intuitive; the aims of the useful or the aims of the beautiful.

It would be utterly unreasonable to suppose that such a chain of unbroken evidences could stand for the workings of mere chance and fortuity. There must be some leading, explicative basis for these ever-present inverse relations between the categories of the useful and the beautiful, as they unfold in unbroken series all along the lines of physical, mental, moral and spiritual evolution—a basis which probably can only be found by admitting into the human equation

the factor of soul. For as the body of man requires for its growth and evolution the concrete substance of material elements—the shocks of sensory nerve impulses—so the soul for its unfoldment requires the ecstatic impulse of the beautiful. The soul feeds on the beautiful, absorbs and assimilates its powers into its spiritual constitution. And as the body forms a vehicle or agency through which the physiological processes of the material universe finds a means and method for its elemental evolution, so the soul represents a living force-unit by which the spiritual universe through the idealizing power of beauty wields a means and method of self-realization. The soul cultivates the ideally beautiful, as the body cultivates the concretely useful; and as the latter fashions its stuff into living anatomical structures, so the former, in absorbing its undefinable pabulum of divine beauty, generates ideas and concepts of the true, the good and the sublime.

Yet, to be an evolutionary force, the impulse of beauty must be met with concrete and conscious response. To the closed and isolated mind, beauty will remain a closed and inaccessible sanctuary. For the only mode of responsiveness to which beauty shall ever yield is love. Love is to the soul, in relation to the beautiful, what hunger is to the body in relation to food; which again means that the admiration and contemplation of the beautiful stands for that process of physiological absorption by which a vital system is enabled to assimilate and organize its nourishment into available qualities and powers. Hence, to ignore the beautiful, *i. e.*, to fail to observe its manifestations with love and admiration, means to the soul and its growth what the disregard for physical nourishment means to the body, the gradual decay and dissolution of the dependent entity. Without a power to love the beautiful, the individual shall remain a groveling brute, dead to everything but the thrall of a mere sensual vegetative existence.

For beauty is the lodestar of life, the mythical Ariadne-thread, guiding the soul to its destiny through the bewildering labyrinth of gross, sensuous, passion-wrought existence. Forever upward and onward, like Aurora on the wings of dawn, blazing out the course for the advancing solar-majesty, the divinity of beauty illumes the career of the human soul as the latter proceeds on its pilgrimage through universal evolution. To lose the guiding influence of its powers, means to be left to stalk about aimless and helpless in the ever-shifting vicissitudes of material existence, conscious of nothing but the mean, circumscribed wants of mere intellectualized brute life.

Any attempt to utilize beauty by enlisting its service for the furtherance of material progress degrades it. For beauty is not an evolutionary steam engine, by the action of which the profits of cultural and industrial operations are enhanced. It is an ecstatically vitalizing, inspiring force, not a mere dynamic agent. Its mission is to guide and direct rather than to move and propel. To employ its powers as a dynamic lever for the furtherance of general progress involves the same principle as to use the searchlight of an ocean steamer for the generating of steam in its boiler. Would the temporarily increased speed of the vessel compensate for the loss of the guiding flashes by which the ultimate progress and safety of the navigation is to be made possible? The light of beauty, like the mythical fire of Olympus which Prometheus brought down to serve the small aims of earthbound men, can suffer the degrading touch of utilitarian motives only at the loss of its inspiring and guiding genius, leaving the transgressor on his fatuous Caucasus to work out his destiny in guideless and powerless isolation.

For beauty is not a mere sentiment—a fragrance, as it were—ephemeral and meaningless. Beauty is a cosmic force, wielding in its sweep the whole scope of spiritual evolution. In itself non-moral, beauty becomes moral or immoral, according to the standard of motive applied by the poet or artist in his effort to interpret or translate its genius. And as beauty is thus colored by its imported motive, and furthermore as any coloring, however apparently pure and elevating, must, by its very nature be personal, hence limited and more or less untrue, it follows that art, to be pure and spiritually legitimate, must forget itself and

ignore personal motive, while wholly and trustingly surrendering its energies to the cosmic, impersonal impulse, wherever the latter may lead. The presence of a personal motive generates a refractory medium in the mind of the artist, rendering his vision dim and his ideal disproportionate. Motive in art is the Procrustean bed on which Beauty is contortioned into a fixed and ankylosed figure. The artist, be he painter, sculptor, poet or composer, must have the power to rise in contemplation to the formless and boundless, to discard hopes, sympathies, opinions, theories—yea, art itself—while yielding up his very sanity to the ecstatic vision, the impersonal will-impulse, the intuitive perforation. The merest reflective touch, or yielding to the fashioning, computing action of the intellect, at once mars the sublimity and holiness of the word or picture. Hence, while science and philosophy, to their nature are didactive, art can intellectualize and theorize only at the peril of involving self-destruction. The question to be held before the artist is not to what extent shall I succeed in imparting through this painting, this statue, this poem, this song, a power to affect the moral consciousness of the world as I conceive it, but rather, how shall I adjust myself to these divine forces so as to be true and faithful to the task, and able to flawlessly mirror her light in my creation? For while philosophy computes and constructs, and science applies and exhibits, art must serve as a mirror for the rarest light—the light of the soul—the substanceless vision, and therefore be absolutely pure and free. Science is gauged by instinct and intellect; philosophy by intellect and feeling: art by feeling and intuition. The subject-matter of art is intuition, while its discerning power is feeling.

This separation in consciousness between the beautiful *per se*, and the personal and circumscribed qualifications of the mind, as represented by the forms and modifications of reason and intellect applied to art, indicates at once and unmistakably the position which the artist can and must occupy in his field of action. The only legitimate signature by which true art identifies itself with its work, is the disclaim of self-interest and freedom from personal motives. For as an artist —no matter what the greatness of his genius—if still held by his egoism to the limiting horizon of concrete causation and temporal moral imagery, and thus depends for his vision on the light of the probable and appreciable in the passing event—it follows that his knowledge of life in general, and of the human soul in particular (its needs, powers and possibilities), is bounded rather than boundless. And yet, what but the boundless and timeless vision can ever be trusted to dictate or prescribe for the creatures of evolution a course which, with unerring safety, is to complete the circuit of their destiny? Would a gardener, however experienced, trust himself to adequately dole out so much nitrogen, oxygen, carbon, etc., required for each plant to strike the biologic balance of its growth? Or does he not rather trust to the fact that the plant, by virtue of its native powers of absorption and selective affinity, will extract from the soil and air the elements needed for the fulfilling of its specific evolution? How, then, dares the artist—a veritable gardener of the soul—in administering beauty to human life, emphasize any particular characteristic, any conventional and ephemeral aspect of moral principle or esthetic concept, any intellectual code of virtue, any personal lesson in heroism, patriotism, pietism or civic excellence, when beauty in itself, in its own eternal, ever-present, ever-inspiring genius, contains all that is essential and needful for the safe unfoldment of human life and destiny. To arraign beauty in any didactive attitude, even the noblest; to endow her with any attribute, however ethical and exalting, is to crystallize her spirit in a mold of clay, to change her radiant smile into a grinning proxy, to embalm into immovable fixity the impulsive play of life in its cyclic, rhythmic action—in a word, to give permanence and ceaseless perpetuity, as a moral lesson, to a conception temporarily arising in the mind of the artist, only to be followed by innumerable others in the natural course of development, and in response to his continued aspiration. Art is spiritually legitimate only to the extent it is structureless and fluidic, *i. e.*, to the extent it employs symbols in place of con-

crete elements in its representative work. To be true to beauty, and a trustworthy interpreter of her message, the artist must throb unceasingly to the pulsations of highest spiritual life. Type must mercilessly be sacrificed to symbol, technique to movement, posture to rhythm. Form, phase, perspective and general laws of mechanics—however indispensable for the expression and cultural appreciation of art—simply indicate the inadequacy of personal intellectual consciousness to the task of comprehending beauty; the evidence of mental exhausture in the efforts of the artist to respond to, and to interpret—through the play of affirmative, motivized, personalized self-consciousness—the breath and force of magic life, the ethereal touch of the wing of the soaring genius which we call beauty.

For beauty is abstract, form is concrete. To grasp the meaning and genesis of beauty, feeling alone can be trusted to occupy the field of observation. Any impulse tending to abduct the artist from the path of feeling is inimical to true art. To permit intellect and personality to take part in the labors of art is to usher into its sanctuary the conflicting statements of mental judgment, moral discussion, intellectual agitation, etc., in the chaos of which the light of beauty sooner or later becomes extinguished. Accessible only through the tuitions of feeling, art, to become a vehicle for beauty, must spiritualize the mind of its devotees into flights of purest abstraction, uncolored by any sentiments, any attributes, any temporal aim or object, any fear, hope or desire. For the artist is not to materialize the spiritual, but to spiritualize the material; to set wings to the soul, and fire to imagination; to lift the whole human situation, not on a basis of civic interests or ethical application, but by exploring the realm of the unseen, by listening to the unheard-of, by feeling the inexperienced and unknown; to see, to know, to feel the genius of beauty; to revel in its light, and create by its powers; and thus, by opening up sluices of vital harmonies in his soul, succeed in metamorphosing the individual from man to superman. The artist is safer—is, in fact, then only safe—when relying on nature rather than on culture for his guidance and inspiration. The picture galleries of nature exhibit the moral dignity, vital supremacy and simple loftiness of true life—the statuesqueness and elemental power of the mountains, the immensity and spotless purity spread before us in the ocean; the innocence and vital graces made living and impressive in the animals; the touching beauty and loveliness enchanting us in the flowery world, etc., are all means and methods by which nature, through an exalted symbolism, aims at overcoming the impediments of type by stimulating the human imagination to transcend the sphere of form.

It was not from failure to understand the moral value of the useful that gave to Kant the notion of separating in his mental categories the element of beauty from the element of the useful. With intuitive keenness he recognized that the support of the concrete world has not its basis in the beautiful, nor is the latter an outgrowth or expression of the useful; but that beauty has its aim and object in recalling to our minds an immortal and divine existence.

And as feeling is the faculty that enables us to communicate with the beautiful, it follows that the field of life where the greatest opportunities are offered for the unfoldment of true art, is found in the realization of individual self-consciousness. Before I can know the feelings of my fellow-creatures, and become capable of describing them, I must acquire a knowledge of my own; and this phase of knowledge, when expressed in descriptive art, is called lyric poetry—the only poetry which is at once imaginary and real, at once truth and fiction. It is the description of life itself, as found to well up in the unceasing changes of consciousness, detected and portrayed by the power of individual feeling. And thus, while the didactive, *i. e.*, the intellectual, reflective poetry of Alexander Pope, who once put a game of chess into rhyme and meter, possesses no other survival value than that of an ingeniously elaborated philosophical or ethical treatise, the lyrical poetry of Burns, Byron and Shakespeare with their immense, all-swaying individual feelings, by which they gained knowledge of the

deepest springs of human nature, will never cease to exert a powerful influence over the hearts and feelings of men. Lyric poetry suffers no social contracts, no standards of conventional moods, or modes of form; is not confined to the succession of time, or the limits of space; it spreads its wings over centuries and ages, imparting duration to the sublime moment in which man rises superior to the pains and pleasures of life. Under the spell of the lyric poet we dispense with the measuring, calculating and circumscribing conception of life, as we rise to the horizon-free vision of beauty in its native, transcending grandeur and holiness. Soaring in the motive-free regions of pure feeling, we forget the tumult of earth in listening to the swelling harmonies of liberated soul-life. Existence, with its strife and strain, recedes into the calm, passion-free symbolism of impersonal, evolutionary vital processes.

Only through the power of feeling can beauty be determined. The form, as such, which largely appeals to our intellect, can only with uncertainty convey to us the beautiful. To the eye of feeling and to the eye of intellect the world presents diametrically different aspects. Often what the intellect admires, the feeling passes by with indifference. Often the ruins of structures and monuments give rise to stronger emotions and nobler thoughts than a newly-erected architectural masterpiece. What are the structures of modern building-craft, with all their elaborate and motley adornment of luxury and brilliancy, when compared with the crumbling fragments of ancient ruins—the segment of an arch, or a few broken-down columns—if measured by the soul-heaving and exalting emotions conveyed to the reverent beholder? "Perhaps," says Madam Stael, "that a masterpiece of art in all its splendor can not impress us with such grand ideas and aspirations of beauty as its own ruins. * * * Beauty is of expression, not of form."

It is to be understood, however, that the beautiful is divorced from the useful only on the plane of the concrete and ephemeral. Applied to the eternal part of the individual, the beautiful possesses a usefulness which involves issues so sweeping and far-reaching that the rise and fall of solar systems form incidents in its career. Ultimately considered, it is in the object of beauty that the usefulness has its greatest significance, revealing, as it does, the powers and potencies in the individual soul by which the key is given to unlock the mysteries of both animal and divine nature. Beauty is the signature of truth, and it is truth that shall make us free. Through beauty our interests expand from the needs and necessities of the body to the needs and necessities of the soul; from the usefulness of physical evolution to the usefulness of spiritual evolution. On the wings of the beautiful the soul of man rises himself from Earth to Heaven.

Byrne Building.

[Written for the MEDICAL BRIEF.]

Obstetrical Case—Arm Down and Head Behind the Shoulder.

BY C. D. R. KIRK, M. D.,
Shuqualak, Miss.

I was called to assist Dr. J. D. Kellis, of this place, in delivering a woman who had an arm down, the Doctor having found that there was too much for one doctor to do. The patient was a small negro woman who had several children. The child was most thoroughly packed, and it was with the greatest effort that a hand could be inserted in any direction. We administered an anesthetic, and, after several failures, a hand was made to pass with palm to the child's back, and succeeded in ascertaining that the head was back of a shoulder and the neck stretched to a very small size. We undertook to dislodge the head by pushing it up, and at the same time a steady pull of the presenting arm, but failing in this, we made another effort to reach a foot, and, after an exhausting trial, with palm to the back of the child, a foot was reached, but not until operator's hand was so much exhausted and cramped that he could not grasp the foot with sufficient strength to disengage it; therefore, the blunt hook of a Hodge forceps was made to follow the hand to the child's foot, and made to grasp it near the ankle; then, by zigzag motion and at the same time

strong pressure on the child's presenting hand, it was turned and delivered by the feet. The uterus closed down nicely, and some stimulant revived the patient, but she died in a few hours of exhaustion.

In a long practice the writer has seen but two cases of this kind, viz., arm presentation with head behind the shoulder. The other case was a large, roomy woman, and, therefore, the child not so thoroughly packed, but all such cases are very difficult to deliver, and will test the doctor's skill and physical strength.

[Written for the MEDICAL BRIEF.]

Perversion of Phosphates.

BY J. M. ADAMS,
Biological Chemist, Watertown, N. Y.

The American haste in eating is raising great havoc with digestion. It is hardly worth while to give a warning, for people will not heed anything said on this subject. It is not anything new, for all doctors are well aware of the fact. The strangest part of all is that doctors themselves are often so hurried as to take as little time in eating as possible. It is one of the worst habits to regulate and control of any formed, for it follows the very nature of the individual, and is a part of his make-up. The hurry is on, and nothing can stop it. The stomach must take care of itself, no matter what follows.

A greater damage comes from intestinal fermentation of granular nuggets of starches or grain foods in lumps, which if unchewed as fine as flour, will, as soon as they reach the intestines, become fermentative in more or less degree. The slightest fermentation will cause a like precipitation of phosphates from the food, and right here becomes the trouble that affect so many.

As an experiment, suppose we have a clear solution of phosphates in a tube and add thereto a drop of ammonia. The consequence is a white precipitation of ammoniacal phosphates. The fermentation caused by undigested starches affords just this condition in the intestines, and down goes the phosphates, so strong sometimes as to fill the intestines with crystals that cut like powdered glass. The same thing occurs in the urine also, although not quite so direct. These partially precipitated phosphates are also taken up by the lacteals and carried into the blood and finally become lodged more or less, causing phosphatic granulation disturbant rashes, rheumatism, paralysis, kidney irritants, bladder irritants, and all sorts of ailments which result in diseases of nervous system, the bony system, brain, heart, and all sorts of results almost too numerous to mention.

A large part of insane inmates are hoggish eaters. They always swallow foods in lumps, scarcely chewed. The consequence is a robbing of the nervous system of its proper nutriment by a precipitation of phosphates, which become a disturbing cause rather than a feeder of the nervous system. They are thrown into the intestines and kidneys, because not kept up in a solvent form. They become arthritic, terribly disturbed, wild and furious. Nearly all rheumatic cases nowadays are phosphatic. The perversion of phosphates in the system is ruinous in youth as well as in old age.

Children should be taught to eat slowly and chew finely. Elementary school books should insist on this being done. We can not have a healthy and well-developed people without it. "Phosphatics" are always scrawny, thin, lank and lean. The dyspeptic lines from mouth and nose are always indicative of the disordered digestion. Not only are the starches fermentative but the acidity sometimes in the stomach is enough to change them into glucose or partly that way, so as to cause a diabetic tendency, if not the real disease. The sourness of the stomach further changed by acidity of the sugars often makes the whole food in the stomach so sour as to neutralize the pancreatic fluids (which are alkaline), and thus the fats are not emulsionized, and a consequent leanness results. This precipitation of the phosphates is an all-important subject which might be carried further, but enough for the present.

Enclosed find one dollar for the MEDICAL BRIEF. I think this is my twenty-third annual subscription.—J. N. MCLANE, M. D., De Funiak Springs, Fla.

[Written for the MEDICAL BRIEF.]

The Practice of Homeopathy.

BY N. SISCA, M. D.,
Killarney, Queensland, Australia.

(Continued from page 138.)

IX.

The question now arises: Is it claimed for the principle *similia similibus* that it holds good in every case? No. Homeopaths frankly admit that it has limitations, and the late Dr. R. Hughes, whose writings have done so much for homeopathy in Great Britain, in his "Principles and Practice of Homeopathy," says: "Where your patient's trouble is one which drugs can not simulate on the healthy body, you can not apply your law. How can drugs produce anything like the disorder of sensation and function attending the passage of a calculus? How can they supply analogues to neoplasms?" Further on Dr. Hughes says: "Cold baths in typhoid; hyposulphite of soda for preventing the recurrence of relapsing fever; full doses of iodide of potassium in tertiary syphilis, of opium in peritonitis from perforation, of digitalis in cardiac dropsy, nitrite of amyl in the paroxysm of angina pectoris—even venesection when necessary in uremic coma, are instances of treatment on which homeopathy can hardly improve."

On the other side of the Atlantic Dr. Preston Sutherland, of Boston, in his presidential address to the American Institute of Homeopathy (1904), said: "Is there any one calling himself a homeopathist today who will claim that the use of a drug alone, administered along the line of similars, will cure every diseased condition as quickly and surely as any other means known to the medicine of today can cure it? Is there any homeopathist today who claims that he can select a drug under the law of similars which will achieve the results of fresh-air treatment in tuberculosis, of surgery in pathologic conditions requiring the knife, of saline injections in collapse of diet in diabetes, gout and scurvy, of thyroid extract in myxedema, of psychotherapy in certain neuroses, of suggestion in hysteria, etc.?"

Those, then, are the acknowledged blanks and limitations of *similia similibus*. For the rest, homeopaths say no case of disease which is at all amenable to the influence of medicine can be said to be outside the sphere of its dominion. Is it all true? Can it be all true? We can not say yes or no until we have tested it.

And now a word as to the value and the importance of symptoms in the practice of homeopathy.

It is often alleged against homeopaths that they are mere symptom-treaters, but let us see: To begin with, we must not lose sight of the fact that, as I have said more than once before, homeopathy is essentially and exclusively a method of drug treatment, a method, that is, of applying drugs to the treatment of disease. Its reign, therefore, begins and ends with treatment, but the treatment which homeopathy advocates presents the distinguishing feature of being based on the study and interpretation of three different sets of symptoms. Homeopathy goes hand in hand with allopathy from anamnesis to prognosis, but when it comes to treatment, then the best and most important half of the homeopath's task begins, because then he has to diagnose his remedy, a single remedy, which must be the nearest possible approach to the *simillimum*, the one, that is, which will cover the totality or at least a large majority of the symptoms. And this he can only expect to be able to do by mastering the whole symptomatology of the case, viz.: 1. Objective symptoms, or, as we call them, physical signs. 2. Subjective symptoms, as described or complained of by the patient. 3. Drug symptoms, or those belonging to the drug, of whose pathogenesy the objective and subjective symptoms of the case in hand are the most approximate reproduction. In order to make this clear, let us see, for instance, how a homeopathic physician would, or, at all events, how I think he would, treat a case of ordinary colic.

He would first of all satisfy himself as to the origin of the colic, whether brought on by a chill or by indigestible food, etc.

Next, he would notice whether the patient has hiccough, whether he is very intolerant of pain and inclined to be snap-

pish, etc., and then he would proceed to question him as to whether he is constipated or has diarrhea; whether the pain is worse at night; whether the hot applications he most probably has used have relieved the pain, or, perhaps, made it worse; whether the pain is relieved or not by bending double, or else worse by bending double and better by straightening the body out; whether the pain begins at the navel and radiates all over the abdomen; whether, perchance, he feels as if his belly were full of sharp sticks or stones, etc.

After this the physician would examine the abdomen to see whether it is tympanitic or relaxed, or else retracted to the spine, and to feel by palpation whether the abdomen is sensitive to touch; whether the transverse colon can be felt distended like a pad, or if there is a spot which feels as if grasped with the nails, etc.

Finally, and as quickly as his knowledge of the *materia medica* enables him to do, our homeopathic confrere would mentally make his drug diagnosis and prescribe or dispense the medicine, as the case may be. Of course, there would be no objection to the use of warm applications, if not contraindicated, and if the exceptional severity of the case made it imperative, even an injection of morphia would be resorted to, but homeopaths, as a rule, have very little confidence in morphia, and never resort to it unless literally compelled to do so.

If we now take the principal drugs, which have colic in the adult as one of their symptoms, in their alphabetical order, the process of mental drug selection would be somewhat like this:

Colic from a chill, great mental and physical restlessness, no position relieves —aconite.

Incarcerated flatus at a spot which feels as if grasped with the nails, transverse colon protruding like a pad, abdomen extremely sensitive to touch, even of bedclothes—belladonna.

Pain worse at night, flatulence, great intolerance of pain, worse by hot applications, patient inclined to be snappish and spiteful—chamomilla.

Pain worse at night, flatulence, nausea, depression, abdomen feels as if full of sharp sticks or stones—cocculus.

Pain agonizing, relieved by bending double—colocynth.

Pain begins at navel and spreads all round, worse by bending double, better by straightening body out—dioscorea.

Colic, with diarrhea, from exposure to damp cold—dulcamara.

Pain greatly relieved by hot applications, much belching of gas with no relief —magnesia phosphorica.

Colic, mostly associated with obstinate constipation, abdomen retracted to spine as if drawn by strings—plumbum.

Colic accompanied with hiccough—veratrum album.

But that is not all. Should the abdominal pain or soreness turn out to be the recent or remote after-effect of a bruise, all the above drugs would not "be in it" at all, and the remedy would be arnica. Or if the pain recurs with clock-like periodicity every day or every other day, and so on, the remedy would probably be cedron, etc., etc.

Taking now the above as a fair specimen of homeopathic practice, what is there in it to justify us in saying that homeopaths are mere symptom-treaters? If anything, there is evidence in it of the fact that the homeopathic physician examines his patients more minutely, listens to them and questions them with greater patience and more painstaking completeness than most of us deem it necessary to do. It is undoubtedly true that the importance of symptoms in homeopathic practice is paramount, but that is only in keeping with the fact that from the time of Hahnemann to the present day, homeopathy has always taken the clinical aspect of disease as its working basis, giving, of course, its due to pathology so far as its importance for diagnosis is concerned, but maintaining all through that for drug therapeutics on the homeopathic principle symptomatology must supersede diagnosis. Only it is not this or that other individual symptom that decides the selection of the homeopathic remedy, but the totality of symptoms; that is, the totality of the phenomena exhibited by the entire organism under the influence of disease. One or two instances will make this clear:

Some few years ago a patient suffering from some lesion of the nervous system

which gave rise to the phenomena of progressive muscular atrophy, and whose case was said to have been pronounced incurable, and probably fatal by allopathic neurologists, consulted the late Professor T. F. Allen, of New York. Ignoring, so far as treatment was concerned, all the learned opinions which had been put forth relative to the pathology and prognosis of the disease in hand, Dr. Allen approached the case more homeopathico, and as the totality of the symptoms suggested phosphorus, phosphorus was given, and it cured the patient.*

On one occasion a certain physician of Albany, New York, was called in consultation on a supposed case of phthisis pulmonalis. After carefully examining the case, he was asked: "What is your diagnosis, Doctor?" "Stannum," said the Doctor. "What?" "Stannum," he replied. Stannum was the diagnosis of the remedy, not the disease. Stannum was given, and cured the patient.†

That, then, is the position taken up by homeopathy. "Pathology," says Dr. Hughes, "has taught us to recognize enteric fever as specifically distinct from typhus, and for many purposes this differentiation is highly important, but the indications for its homeopathic remedies were just as plain when it was classed as typhus abdominalis."

Pathology, says the homeopath, is good for diagnosis and prognosis, but symptoms, especially the subjective ones, are the basis for treatment, or, in Hahnemann's own words: "The totality of symptoms, this outwardly reflected image of the inner nature of the disease, must be the chief or only means of the disease to make known the remedy necessary for its cure."

And, as if to re-echo Hahnemann's words, Dr. Rose Bradford, in the "Purvis oration," delivered at Greenwich (England) in December, 1904, said: "The importance of the thorough study of symptoms must be at once granted when it is remembered that in a large number of functional diseases symptoms only are present. In many functional diseases the remarkable character of the subjective sensations complained of by the patient afforded a clue to the differentiation of the malady from organic diseases, with which it might at first sight be confounded. * * * Whether medicine is regarded from the point of view of diagnosis, prognosis or treatment, it is most important in all cases to pay great attention to the study of symptoms, if success is to be achieved."

And such, as briefly, and also, I greatly fear, very imperfectly and disconnectedly, I have endeavored to sketch it out, is the practice of homeopathy, governed and upheld in all its omissions and commissions by its great principle, *similia similibus curantur*, founded chiefly, but not solely, on the study and the interpretation of any and everything that deserves the name of a symptom, and on the correspondence between all the symptoms of any given case, and the "pathogenesy" of the drug, or the symptoms produced on the healthy by the drug, which has any claim to its being the remedy for it.

* *Monthly Hom Rev*., London, February, 1900.

† E. B. Nash, Leaders in Hom. Ther.

[Written for the MEDICAL BRIEF.]

A Short Article on the Subject of Circumcision.

BY A. L. HODGDON, M. D.,
Pearson, Md.

It would seem that some of the medical profession are opposed to the operation of circumcision, apparently considering a foreskin covering the glands to be beneficial to the individual possessing one. I think that the person who has been successfully circumcised is, after the wound has healed, in a much better condition than the one who has his glands covered with a foreskin, as the circumcised man has an uncovered gland free from unpleasant smegma. If a man has been circumcised so that the glands are uncovered, and can not be made to remain covered, and considerable of the internal mucous lining of the foreskin remains back of the glands, I think he is in much better condition after the parts have healed than one who has his glands covered with a foreskin, with possibly considerable unpleasant smegma under the foreskin. I have performed circumcision many times.

[Written for the MEDICAL BRIEF.]

Irritations of the Respiratory Mucous Membrane.

BY EDW. C. ROTHROCK, M. D.,
Palestine, Texas.

Where there is irritation, an engorged condition of the respiratory mucous membrane, an exhausting, hacking cough, remedies to allay the irritation, relieve and give rest to the patient, are called for. Morphine or opium will give relief, but other remedies will be mentioned in this article in connection with this condition. In acute inflammatory conditions of the respiratory organs, as bronchitis, laryngitis, penumonia, etc., remedies must at first be used to reduce the hyperesthesia of the bronchi, alveoli, etc., as the case may be, and throw off the inflammatory condition existing—remedies not only to allay inflammatory action, but to enable the mucous membrane to secrete and throw off the morbific products. The frequency of throat and lung troubles, and their serious nature, make the subject of treatment of the greatest interest. In such cases inflammation often spreads rapidly by continuity along the bronchial mucous membrane until the lungs, small tubes, alveoli, etc., are involved, constituting pneumonia, broncho-pneumonia, capillary bronchitis, etc. Such conditions frequently occur, particularly in children, in whom the structure of these organs is very prone to quick inflammatory action and extension of that action. The bronchi becomes plugged with mucus which, in young children, is not expelled, which may lead to collapse of adjacent areas of lung and extension of the disease and embarrassed respiration. In the early stage the physical signs may be, and often are, masked, and, therefore, the diagnosis is frequently not made until the disease is well advanced. The early recognition of the grave nature of such troubles and prompt measures of treatment, both medically and to sustain the vitality of the respiration and the circulation, are important. The elevation of temperature will often aid us to form a proper diagnosis frequently when the physical signs are not recognized. These signs vary greatly as to location and extent of involvement of the pathological process.

The fine râles heard on deep inspiration frequently escape notice, but respiration will always be accelerated and often labored, and as the disease progresses, dyspnea, high temperature, dilation of the alæ-nasi, recession of the soft parts on inspiration appear. These symptoms are more marked in children. Prostration is often present, even in the first stage, and will indicate the treatment to maintain the vital forces. As to treatment, the first consideration is the respiratory function, to clear out the irritated bronchial tubes by prompt liquefaction and expulsion of mucus, and in infants prevent its absorption. The free access of pure air to the diseased parts will be of the greatest advantage. The air of the sick room should always be as sweet and pure as ventilation can make it; windows should be opened at the top. Draughts are to be avoided, of course, and an equal temperature should be maintained. The respiratory tract must be kept free and clear as much as possible. In children the nostrils are often plugged up by secretions which collect in these parts and often embarrass the breathing. Vaseline inside and outside the nostrils frequently is of use and effectual. Free irrigation with a warm alkaline wash, as a half-teaspoonful of bicarb. soda, or the same amount of borax or of boric acid to teacup of warm water will be effectual in relief of the occlusion. In young children under four or five years, there is very little expectoration, if any. The mucus that collects in the bronchi and sometimes coughed up should be removed by the fingers of mother or nurse, and not allowed to be swallowed; this will be of great relief. The respiratory muscles are weak, and the walls of the chest are soft and yielding, and the movements of the thorax in the act of respiration very easily become embarrassed in young children when mucus is allowed to collect in the bronchial tubes, and is not expelled. The muscles of respiration are greatly impeded, often causing congestion and collapse of areas of lung. Atalectasis is collapse of lung. Air vesicles become clogged and exclude air, the plug gets out, but air can not get into the acini, and collapse follows.

Ammonia is a valuable agent to clear the bronchi; the carbonate or muriate is very useful; the carbonate of ammonia, one to two grains given in syrup or milk every one or two hours, according to urgency of the case, and would not be too much for a child one or two years of age. Aromatic spirits of ammonia is a nice preparation, and could be used in doses of ten to twenty drops, water two ounces, teaspoonful every hour or two. We get the stimulation of ammonia and its expectorant effect. The syrup of ipecac is a good old remedy. The wine of ipecac is also good in doses of one to two drops for young children. The acetate syrup of sanguinaria in doses of five to twenty drops, according to age of child, every two hours, is prompt to relieve. Sanguinaria is a valuable remedy, and in croup is near specific; in penumonia it is very useful; in chronic nasal catarrh, hypertrophy of nasal mucous membrane by insufflation, it is curative; in acute or chronic bronchitis and asthma it is prompt to relieve and cure. It is an excellent tonic expectorant. It is an excellent expectorant in small doses of the sanguinaria, one-eighth to one-sixteenth grain for adults, and can be used in place of the syrup. But for children the syrup is preferred. Temperature is often high. 105° F. and over; to reduce heat, aconite, one-quarter to one-half drop should be given to children one or two years old, every hour or two, as indicated until temperature abates, then every three hours. Aconite should be used with care; it has a selective action on heat centers, and is one, if not the best, of medicaments to overcome inflammatory action. For adults aconite, spec. tinct., one to two drops, is the dose. Some could take more, but small doses have better effect. Aconite has been called the "therapeutic lancet." A lethal dose produces great muscular weakness, irregular and labored respiration, slow and weak pulse coldness of the surface, clammy sweat, tingling in extremities and lowering of body temperature. Death is from paralysis of the heart and respiration caused by relaxing of the inhibitory apparatus of the heart, hence paralyzing the cardiac ganglia, the spinal cord and respiratory functions.

Counter-irritation to the chest is very useful, as mustard; a warm mush poultice with turpentine upon it and applied over the chest is of great benefit, and should come up well on the neck. A flannel well soaked in tallow, sprinkled with turpentine, applied warm and allowed to remain for a day or two, is good. I have kept such plasters on for days with much relief to patient. It has a tendency to draw the blood to the surface from engorged parts; keeps the skin moist, and at a uniform temperature, relieves pain, and greatly adds to the comfort of the patient. A constant cough disturbing the patient is relieved by breathing warm, moist air; a vessel containing warm water and a few drops of turpentine, is good; so is camphor in the water, or used as an atomized inhalant. It is very agreeable to the pulmonary organs, and could be used every three hours. Codeine, one-fifth to one grain for adults, for children one-thirty-second to one-sixteenth grain, as to age, is very valuable in irritation of the bronchi, where there is a hacking, teasing cough. It is less constipating than opium, and no doubt but what it has a selective sedative influence on the pneumogastric nerve.

A supporting treatment in disease of the respiratory organs will nearly always be needed in children from the first, and, indeed, frequently in adults. An easily assimilable nourishment must be used; sweet, fresh milk, rice, raw or partly cooked fresh eggs well beaten, or very soft boiled eggs and meat broths.

[Written for the MEDICAL BRIEF.]

Therapeutics of Collinsonia.

BY WM. I. MOORE, M. D.,
Kingsland, Texas.

Will you please, in some issue of the BRIEF, give us a write-up of the therapeutics of collinsonia?

[We call on our readers to let the Doctor, or whoever else may be interested, know what collinsonia will do, more than the dispensatories say in regard to it. The American Dispensatory seems to give, through Professor Scudder, a pretty fair statement of its virtues.—ED.]

[Written for the MEDICAL BRIEF.]

Constitutional Effect of Idiopathic Epilepsy.

BY PATRICK T. MELDON,
An Experimental Medical Scientist.
San Bernardino, Cal.

This patient, at the time of treatment, was thirty-three years of age and the mother of five children. One child, a boy, inherits her disease, in the procursive form.

Her first attack of epilepsy came on when she was three years old. She was married (advisedly) when she was fourteen years old. Soon after her marriage her bowels became torpid, and a little later ulcerated; medical treatment kept her bowels relieved from time to time.

Her epileptic spasms averaged about fifteen per week, but they were not the characteristic convulsive spasms of true epilepsy. She would simply drop and as it were go into a deep, placid sleep, and remain in it from one to three hours; relaxation of every muscle and fiber then took place, congestion and hemorrhage of the left lung being prompt, and uterine hemorrhage closely followed. In that way the patient had often flowed for several consecutive days.

Five years ago the constipated and ulcerated condition of her bowels refused to yield to medical treatment, and she was medically advised to leave her home (in Ohio) and go to California. This advisement did not have the desired effect; the septic condition of her bowels got worse after she came here, and the best physicians afforded her only nominal relief. In my investigations of various supposed incurable diseases, her case, as an epileptic, came to my notice. She was indifferent about giving me the history of her epileptic affliction, but she was anxious to know if I could relieve the condition of her bowels. This condition, having bested so many physicians and treatments, seemed to justify me in making an experiment, so the following was tried in her case:

℞ Precipitated Sulphur.....2 ounces.
Pd. Myrrh.....1 ounce.
Pd. Aloes..... ½ drachm.

M. Sig.: One-half to one teaspoonful once or twice a day after eating. Irrigated the bowels freely once a day, after evacuation, with one-half of one per cent solution copper sulphate.

This prescription cured the ulcerated and constipated condition of her bowels in about twenty days. A cure of the ulcers was expected from the start, but a permanent cure of her constipated condition—such as has been effected—was not expected. At least, her bowels have been acting with perfect ease and regularity during the past year and nine months, or since she took the treatment.

Two months after this treatment she complained to me of soreness across her abdomen; she said she had been troubled with it for several years. As most all epileptic patients have a feeble circulation and a cool skin, that was taken into consideration. On examination her skin was found cool and her pulse rate fifty-nine beats per minute;. this indicated feeble sexual power. When closely questioned she said she always had to strain herself in copulation; and in most cases—even after severe straining—she would fail in her function, and, physically exhausted, have to abandon the effort. When she would accomplish her function, flooding would usually result, yet, regardless of the result, she was always anxious for complete copulation.

For this affection I gave her two drachms of tincture cantharides, two ounces powdered cubeba, and directed her to take three drops of the cantharides on about eight grains of the cubeba three times a day. In six weeks on this treatment her pulse rate went up to seventy-two beats per minute, the abdominal pains had left, copulation was successful without effort; and only two epileptic spasms—both within ten hours of each other—but they were evidently very slight in the absence of either lung or uterine hemorrhages. The patient was delighted with what good the treatment did in her case, but I regret it should have done much mischief as well. She was, to all appearance, a plain, very reserved and modest woman before the treatment, but now nymphomania has plainly set in. She plainly told me that which surprised me as the result. It seems as if she could not control the sudden awakening from her long torpid condition. She plainly and boastingly told me that she had, as the result, violated her marriage relation and added, "If he don't like it" (meaning

her husband) "he can hit the high places." I listened to her attentively, and when she asked to have her treatment renewed. I turned on her with a storm of evil abuse and sent her away trembling and tearful.

She has returned several times since then, requesting me for the treatment, and stating that her sexual nature has gone back to what it was. But her spasms are still very few and only of about twenty minutes duration. She says that my treatment for her sexual weakness was curing her epilepsy, but I know that it was only reducing it by curing its constitutionally ill effect, yet, am I justified in denying her the treatment?

[Written for the MEDICAL BRIEF.]

The Treatment of Lobar Pneumonia.

BY ROBERT C. KENNER, A. M., M. D.,
Louisville, Ky.

Careful attention to all details is necessary to success in the treatment of pneumonia. The most scientific treatment, coupled with good nursing, will fail if details are not given attention. In all cases it is highly important that the room in which the patient is confined shall be ventilated properly, and that the temperature is kept at the correct mean. The temperature should not be allowed to go above 70° F., or descend below 65° F. On the one hand a high temperature will be oppressive, on the other the low will prejudicially affect the patient, and he will suffer discomfort or probably contract other diseases.

Stimulants are useful in the treatment of pneumonia, but their routine employment is highly prejudicial in many instances. In any case where they are not called for they are worthless. In cases where they are indicated, I know of no measure capable of rendering greater good. Alcoholic stimulants are vastly superior to strychnine. In fact, strychnine is valuable, but not suited to a case where stimulation has to be maintained for a period. In instances of threatened heart failure strychnine is valuable, but alcoholics are more useful when the effect of a stimulant has to be maintained for a greater or less period. In no instance is it necessary to administer a stimulant to sthenic cases. Here, as already said, they are worthless, but in asthenic cases they are indeed "oak and rock." I feel sure that I have carried many patients through critical phases of pneumonia who otherwise would have succumbed to the affection. Jurgensen is truly one of the greatest observers that has adorned modern medicine. He is confident that stimulants are responsible for the recovery of cases that would otherwise rapidly sink. He therefore wisely advises that stimulants be given in such quantities and in such dosage as will keep the pulse volume full and regular. If large quantities are necessary to attain this, he gives the required amount. He thinks that one who is too cowardly to carry out this principle ought not to be trusted at the bedside, where a life may be lost by lack of intelligence and fortitude. Diet is an important matter. It is a mistake to give too much food. Milk and light foods easy of digestion and assimilation are called for, but in a great many cases more harm than good will be effected. Forced feeding—except in asthenic cases—is not to be thought of. If the patient is allowed to eat ordinary foods, such as meat, bread and vegetables, we will find him suffering very often with indigestion that may beget colic, flatulence, insomnia and other conditions that will prejudice the chances of recovery. Milk and water, soft-boiled eggs, vegetable soup and toast are all the foods I allow. These are adequate, and cause minimum digestive trouble.

For the first week there is generally more or less pleurisy, and as the pain and restlessness are due to this cause, they are factors of no little concern to the attending physician. The pain must be relieved. Often this can be accomplished by application of an anodyne liniment. But in a great many instances only an opiate will be effective. Dover's powder is an agent that has found favor with several generations of practitioners. It can be given to an adult in doses of ten grains, and instructions are to be left with the nurse for it to be repeated as often as is necessary to bring comfort to the patient. Ten grains every six hours are usually sufficient to insure rest and exemption from pain. Blisters are employed by many

able physicians in this country and Europe. My friend, Dr. P. C. Sutphin, thinks them very valuable. They relieve the pain in many cases, still they interfere with examination of the chest, and are opposed by many patients, and I do not frequently use them. Poultices cripple the respiration by their weight, and may work much detriment. The encasement of the chest in cotton batting, etc., confines the heat, and often greatly annoys the patient, and I am not able to see any benefit they confer. It is unwise to allow these patients to exert themselves. Allowing a patient to get up out of bed, or sit up in bed, when he has a fever, unduly taxes his strength, and does material harm. Often cardiac failure is a result of this indiscretion.

The sulphate of quinine, in my hands, has proved a remedy of great value in the treatment of lobar pneumonia.

Its action I am not able to explain, unless it be that given by Shoemaker, who says: "As quinine checks the principal phenomenon in inflammation and suppuration, which is the escape of the white blood-cell, and, by preventing the exchange of oxygen by the red blood-cells, reduces inflammation, it is especially serviceable in pneumonia and other localized inflammation and also in reducing discharge from abscesses and preventing sapremia or pyemia." I begin with the administration of the sulphate of quinine in doses of five grains, and continue it until febrile action has ceased to be a factor, and that resolution is practically complete. This drug hastens resolution, and I regard it as the best remedy we know, and, in fact, it is the only drug which exerts what may be truly termed a curative action on the disease process. When the quinine produces much tinnitus aurium, I give the bromides in doses of fifteen to twenty grains. This speedily dissipates this symptom.

When resolution is tardy, we should suspect some associated morbid action. This will be found. But in some instances it will be found that indigestion, restlessness, pain and other symptoms or transient disorders will be found responsible. Failure to relieve the pain associated with pleurisy will greatly protract resolution. In every instance, however, there is some factor that is responsible for tardy resolution, and it must be carefully sought.

It is a great mistake to give a patient drastic cathartics. These lower the resisting powers by increasing debility. I correct the constipation with mild laxatives—but never carry even these to the point of depletion.

It is greatly to the advantage of the patient to give him a tonic. A preparation containing the extracts of cod liver oil, or an emulsion of cod-liver oils is of great value.

[Written for the MEDICAL BRIEF.]

Those Bible Myths of Eden.

BY J. W. LOCKHART, M. D.,
St. John, Wash.

I have been much interested in some contributions to THE MEDICAL BRIEF on the "Bible Myths of Eden." So far as I am personally concerned it would be far easier to believe the so-called myths than to give credence to the arguments produced to show the mythological character of the Bible narrative. That the creation of the world and of man's advent into it are surrounded with unfathomable mysteries is accepted as a part of my theological belief. I have an unbounded faith in the statement that "In the beginning God created the heavens and the earth." I also believe that the laws which control the universe are a self-existent, integral part of an Infinite Being. Believing this, it requires no great stretch of imagination to conceive that such a God, operating through the laws of his own nature, could create an animal and call it man, or Adam, as it is found in the original Hebrew. The assertion made by one of the writers in the BRIEF that the "Ancient Adam was not a man or male of the human species, but, rather, a mythical being representing the ancient Egyptian Goddess of Death, Atum, or Atoum," is so much at variance with the best authenticated Egyptian history as to deserve more than a passing notice. If such acknowledged authority as Professor Rawlinson may be relied upon, Tum or Atum was simply one of the numerous Sun-gods worshiped by the Egyptians at different periods of their history. He is also styled

"the maker of men," "the universal Lord," "The Creator God," and "the Lord of created beings." He is nowhere mentioned as either a God or "Goddess of Death." Again, Rawlinson says: "Net, Nat or Neith, according to the Greeks, correspond to their Athene, and was thus a personification of the wisdom or intellect of God. She was also known by the title of the Great Mother, which would seem to imply that she was essentially a Nature goddess, not very different from "Maut." It is certain that it was from "Neith" and not from "Aten" that the Greeks derived their word Athene. Aten was simply another of the numerous sun-gods of the Egyptians, and worshiped under the form of a large circle. There seems to have been nothing very peculiar in his worship except that at one time he seems to have been an important rival to Ammon-Ra. He was soon discredited.

"Athor represented the lower hemisphere, from which the sun rose in the morning, and to which he sank at night; but, in the course of time, came to be regarded as only one of the many divinities of the lower world, to be adored together with Osiris, Isis, Horus and others."

"Isis, in original conception, did not differ much from Athor, with whom she was sometimes identified by the Greeks. She was called the mother, as well as the wife and sister of Osiris." Osiris was, originally, a personification of the divine goodness, but came, in time, to be regarded as a form of the sun, the great deity of the lower world, or Hades. His chief office was to judge the souls of men when they entered the lower world. Ammon was the chief god of the Egyptians, the "god above all gods, the king of all gods." Maut, "the mother," was the wife of Ammon, and represented the passive principle in nature. There is no valid evidence whatever that she was ever worshiped in any sense by the Hebrews.

If we may trust to our best dictionaries, philologists do not attempt to trace the origin of our word, Mother, further back than the Anglo-Saxon word, moder. They tell us, too, that our English word "woman," is derived from the A.-S. word, wifman. Why Dr. Morgan has not enlightened the makers of our dictionaries on these points is a mystery to me. Again, the Doctor says: In the Bible we find evidence of her (Mut-Khora), worshiped by the Jews, in the Golden Mice that were carried with the "ark" and in the temple to soften this goddess' anger against the people. If the readers of the BRIEF are really interested in knowing how unfair, not to say palpably dishonest, the Doctor can be, let them turn to the sixth chapter of First Samuel and read the account of the golden mice as there given. They were put in the ark along with the emeroids at the instigation of the heathen Philistian priests, and there is not the slightest evidence that they were ever preserved and worshiped by the Hebrews. In Isaiah we learn (chapter 66, verse 17) that mice were an abomination, an unclean thing, with the Jews. It seems to me that we can gain nothing by attempting to overthrow the statements of the Bible, either by bold assumptions or by resorts to the uncertainties of ancient mythologies. Every year, almost every day, the modern discoveries in Babylon, Assyria and Egypt are establishing, beyond cavil, the truth of Bible history. Again, the Doctor says: "The Womb-Man was the Bible's pleasure garden; man's pleasure garden." That statement is next to preposterous. Learned scholars tell us that the Hebrew word "Eden," meant delight, and was to be a place of perpetual delight for the Adam; for God called their name Adam. In the Hebrew, Adam simply means man, while ish is the word used of man in the sense of husband, and ishshah of woman, in the sense of wife, and neqebah, in the sense of female. It seems strange that any one could even claim to find any connection between these names and the names of heathen deities, much less that they could find any reason for connecting the "delights" of the garden with the sexual pleasures. We are told that God commanded the first pair "To multiply and replenish the earth," some time before they were driven from the garden, and it is unreasonable to suppose that this command was not a permission to enjoy the sexual pleasures while they were still in the garden. Our word womb is the same old word that the Anglo-Saxons used to indicate the belly, or abdominal cavity, whether of the male

or female, and then had no sexual meaning in it. The very distance which some far-fetched arguments find it necessary to travel is a discredit to them.

Now, as to the allegorical story of Eve's temptation. As to whether God created Adam out of the dust of the earth, or whether He created a single primordial germ, or ten thousand of them, and developed Adam from the best of the lot, is of little consequence to us. We must assume that if God created man, or had anything to do with his creation, the result must have been a perfect and holy being. Then comes the question, Why or how do we find man in his present deplorable condition, as compared with his former state of purity? All the philosophies and religions of the world, as far back as we have any record, recognized the two principles of good and evil as existing in the human heart, and with none was the belief in the principles of good and evil so distinct as in the Hebrew mind. With most, if not all, the nations of antiquity the serpent was regarded as a sort of incarnation of the evil spirit, and we are told that it was "that old serpent, the devil," that tempted our first maternal parent. Now, it matters little to us whether the serpent talked to Eve in the Hebrew tongue, or whether in the still, small voice of her own conscience, or in the voice of the thunders, or in one or more of the multitudinous voices of Nature. It is enough for us to know that in some way or other man fell from the position of perfection in which a perfect creative being must have placed him. Of course, Moses might have written a few volumes on the interesting subject of creation, and a metaphysical disquisition on the subtleties of the human mind and its relation to the principles of good and evil; he might also have explained the ancient mythologies, geology and astronomy, and all the other mysteries and sciences, but for my part I think he showed excellent taste in writing just as he did. The story of creation, as found in Genesis, is a marvel of condensation which the human mind has never surpassed. And it does no violence to human reason to assume that the persons for whom Moses wrote understood it in a perfect sense.

[Written for the MEDICAL BRIEF.]

Virginia Examination Questions.

CHEMISTRY.

1. Define valence, base, a salt, dialysis, alloy.
2. Describe the chemistry of alcohols and ethers.
3. Give formula of ammonia. The sources and uses of ammonia in medicine and the arts.
4. Give chemistry of respiration, showing what is inhaled, what is exhaled, and how the gases enter and leave the blood.
5. Show by equation how nitric acid is formed by the action of sulphuric acid on potassium nitrate.
6. Complete the following equations:

$$AG\ No_3 + Na\ Cl =$$
$$_4H\ F + Si\ O_2 =$$

TOXICOLOGY.

1. Give symptoms and treatment for carbolic acid poisoning.
2. State symptoms of chronic arsenic poisoning with treatment for same.
3. Describe the difference between alcoholic, uremic and opium coma.

MEDICAL JURISPRUDENCE.

1. Define medical jurisprudence.
2. Give the reliable signs of death.
3. How would you distinguish between insanity and idiocy?

OBSTETRICS, GYNECOLOGY, AND PEDIATRICS.

Dr. H. M. Nash, Chairman; Drs. W. W. Wilkinson and W. B. Robinson, Examiners.

1. What signs are brought out by abdominal palpation in the last stages of pregnancy, and their relative value?
2. Detail briefly the hygienic measures necessary for the successful issue of a pregnancy.
3. Define pelvimetry; what measurements obtained thereby should determine interferences?
4. What circumstances, other than pelvic contractions, may cause dystocia?
5. Describe the management of delivery in breech presentations.
6. Describe briefly an operation for relaxed pelvic outlet.
7. Detail the symptoms and possible terminations of pelvic peritonitis.
8. Treatment of rectovaginal fistula.
9. What therapeutic agents should be cautiously exhibited in infancy, and mention some that they bear proportionately better than adults?
10. Mention the most important diseases of the larynx in children, giving the causes for their greater danger.

SURGERY.

Dr. Samuel Lile, Chairman; Drs. E. T. Brady and R. M. Slaughter.

1. Give the diagnosis and treatment of acute osteomyelitis.
2. Give the cause and treatment of varicose ulcers.
3. Name the surgical diseases common to man and the domestic animals.

4. Give the differential diagnosis between (a) concussion of the brain so-called, (b) fracture of the skull, and (c) rupture of the middle meningeal artery.

5. Give briefly Cohnheim's hypothesis as to the origin of tumors.

6. What is hydrocele? Give diagnosis and treatment.

7. Give the nature and treatment of Potts' fracture.

8. Name the dangers and give the treatment of carbuncle.

9. Give the causes and treatment of cystopetropyelitis.

10. Name the dislocations of the elbow. Give the symptoms and treatment of the backward dislocation.

ANATOMY AND EMBRYOLOGY.

Dr. C. W. Rodgers, Chairman; Drs. Robert Randolph and H. U. Stephenson, Examiners.

ANATOMY.

1. Describe the upper extremity of the tibia.

2. Describe the ligaments of the hip joint.

3. Describe the external oblique muscle, including a description of the superficial abdominal ring.

4. Give the commencement, termination, relations, and branches of the brachial artery.

5. Give the commencement, termination, and relations of the internal jugular vein.

6. Describe the duodenum.

7. Give origin, course, and distribution of the median nerve.

8. Name the muscles, nerves and arteries severed by a cross-section of the thigh at the junction of the middle with the lower third.

EMBRYOLOGY.

1. At what stage of embryonic life does the development of the alimentary canal commence, and from what layer of the blastoderm is it formed?

2. What changes occur in the vascular system of the fetus at birth?

MATERIA MEDICA—HOMEOPATHIC.

Dr. E. C. Williams, Hot Springs, Va., Examiner. (Answer four blocks of questions.)

1. (a) Give the physiological action of phosphorus. (b) Mention the tissues or organs especially acted on by (1) rheum, (2) phytolacca, (3) hammamelis, and 4() caulophyllum.

2. (a) Describe the urinary symptoms of (1) cantharis, (2) lycopodium, and (3) nux vomica. (b) Give the mental symptoms of (1) ignatia, (2) pulsatilla, and (3) platinum.

3. (a) Give five general characteristics of each of the following: (1) bryonia, (2) sulphur, (3) kalii bichromicum. (b) Give the physiological action of aconite.

4. (a) Give the laryngeal symptoms of (1) aconite, (2) spongia, and (3) hepar sulphur. (b) Differentiate the skin symptoms of (1) rhus toxicodendron, (2) graphites, and (3) sulphur.

5. (a) Give the abdominal symptoms of (1) belladonna, (2) pulsatilla, and (3) terebinthina. (b) Mention the tissues or organs affected by (1) trillium pendulum, (2) thuja, (3) petroleum, and (4) lilium tigrinum.

THERAPEUTICS—HOMEOPATHIC.

Dr. E. C. Williams, Hot Springs, Va., Examiner. (Answer four blocks of questions.)

1. (a) Give the indications for the use of antimonium tartaricum in bronchitis. (b) State the general measures applicable in a case of pneumonia. (c) Differentiate bryonia from nux vomica in a case of acute gastritis. (d) Mention the principal clinical uses of (1) trillium pendulum, and (2) rhododendron.

2. (a) Give the indications for the use of spigelia in neuralgia. (b) Differentiate calcarea carbonica from podophyllum in the diarrhea of children. (c) Mention three remedies of especial use after an excess of mercury. (d) Differentiate bryonia from lycopodium in a case of chronic constipation.

3. (a) Give the treatment for acute uremia. (b) Mention the principal clinical uses of thuja and dulcamara. (c) Give the symptoms for the use of aloes and æsculus in hemorrhoids. (d) Differentiate veratrum album from arsenicum in a case of cholera.

4. (a) Differentiate silica from calcarea carbonica in otorrhea. (b) Give the indications for the use of apis in scarlet fever. (c) Mention the principal clinical uses of (1) aurum, (2) platinum, and (3) veratum viride. (d) Give the indications for the use of gelsemium in epidemic influenza.

5. (a) State the principal clinical uses of sanguinaria and rhododendron. (b) Give the symptoms for the use of arsenicum album in acute catarrhal rhinitis. (c) Mention two remedies of especial use in mastitis and give indications for each. (d) Differentiate mercurius corrosivus from nux vomica in a case of dysentery.

PRACTICE, ETIOLOGY, AND DIAGNOSIS.

1. To what disorders are persons of a lithemic diathesis most prone? Outline dietary and treatment of the lithemic state.

2. State early symptoms and causes of tuberculosis.

3. State physical symptoms and diagnosis of asthma.

4. In what conditions is severe pain a prominent symptom; and to what extent does localized pain aid recognition?

5. State cause and management of acute milk infection.

6. Describe the stools of acute enteritis, typhoid, obstructive jaundice.

7. Differentiate between scabies and pustular eczema.

8. What is aphasia? Give cause and differentiate between the ataxic and aphasic forms.

9. Give symptoms and treatment of chorea.

10. What drugs influence character of stools?

11. What clinical significance attaches to cardiac arythmia?

12. Cause and treatment of stomatitis.

PATHOLOGY.

1. Name the phenomena comprised (changes which occur) in an inflammatory process.

2. State the systems through which, and how necrosis is produced by disordered nutrition.

3. What is leucopenia, and in what important disease does it occur?

4. What is an exudate, and what is the character of the exudate in lobar pneumonia, broncho-pneumonia, and acute peritonitis?

5. Name the histological elements to be found in the fibro-osteo-chondro-myxo-sarcoma. By what route do the metastases of sarcoma usually occur?

6. Give the morbid anatomy of acute articular rheumatism (rheumatic fever), and name the possible complications of this disease.

BACTERIOLOGY.

1. Define and illustrate the terms aerobic, obligate, plemorphous, and sporogenous, and name and explain the two varieties of chemotaxis.

2. Describe the micro-organism of anthrax, and give its pathogenicity.

3. What special culture medium is required for the growth of the gonococcus? Give the pathogenicity of the gonococcus.

NEUROLOGY.

1. Give the etiology of locomotor ataxia.

2. Give the symptoms of cerebral apoplexy, and name the conditions the coma of which may be simulated by an apoplectic stroke.

3. Give the prognosis in tubercular meningitis and in epidemic cerebro-spinal meningitis, and the general indications of treatment in the latter.

MATERIA MEDICA.

1. Name, with dose of each, the preparations of salicylic acid. Give its physiological action, and state in what form it is to be administered.

2. Give the preparations of belladonna. Describe the toxic effects and give antidotes.

3. Give the chief alkaloid of cinchona; its dose, and its physiological action.

4. Name the preparations of the chlorides of mercury. Give dose and differentiate the physiological action of each.

5. Name the mineral acids and mention the special properties of each.

6. Give the physiological action of opium. Name its most important alkaloids and give dose of each.

THERAPEUTICS.

1. Into what two classes are bitters divided? Give therapeutic uses. Contraindications. Time of administration.

2. How may the two chlorides of mercury be administered? Give their therapeutic uses. In bilious attacks when you give calomel, what remedy often used to allay nausea would you be particular not to give?

3. Why would you use a strong solution of arsenic when applied over large surfaces? In giving Fowler's solution in increasing doses, what untoward symptom would indicate that the dose should not be further increased?

4. (a) Give the therapeutic application of drugs in the different stages of pneumonia. (b) Give the comparative value of chloroform and ether as an anesthetic.

5. (a) Describe the therapeutic uses of iodin and its salts. (b) What are the therapeutic uses of diuretics?

6. Prescribe a local application for erysipelas, for rhus toxicodendron poisoning. Name some remedies used for epistaxis, croup, singultus, ptyalism. Write a prescription for night-sweats of phthisis, for ascites.

PHYSIOLOGY.

1. What are the uses of the blood, and what is the difference between arterial and venous blood?

2. What is the effect of the pneumogastric nerve upon the heart?

3. What is meant by the term vesicular murmur?

4. What are the characteristics of peptones?

5. Name the pancreatic ferments and describe the action of each.

HYGIENE.

1. Name the qualities desirable in water for drinking and domestic purposes.

2. Give the best methods for disinfecting a house in which there has been a case of smallpox.

3. What precautions should be taken by a physician attending a case of diphtheria?

HISTOLOGY.

1. What is meant by endochondral formation of bone? Describe process briefly.

2. Describe formation of an artery, giving cause.

LARYNGOLOGY, RHINOLOGY, OPHTHALMOLOGY AND OTOLOGY.

Dr. A. S. Priddy, Chairman; Drs. H. M. Nash and O. C. Williams, Examiners.

LARYNGOLOGY.

1. What are the symptoms, course, and treatment of acute laryngitis?

2. Give the diagnosis and treatment, both general and special, of laryngismus stridulus.

3. Give the symptoms, course, some common complications, and treatment of acute follicular tonsillitis.

RHINOLOGY.

1. What anatomical arrangements within the nares render the treatment of chronic rhinitis difficult?

2. Give the most generally accepted theory of predisposing and exciting causes of hay fever, and describe its symptoms.

OPHTHALMOLOGY.

1. What are the microscopical appearances of the most common forms of keratitis, and the appropriate treatment?

2. Give the causes, symptoms, and general local treatment of trachoma.

3. Give cause, symptoms, and treatment, both prophylactic and remedial, of ophthalmia neonatorum.

OTOLOGY.

1. Define tinnitus aurium and give the cause of it.

2. Give briefly the diagnosis and treatment of acute otitis media.

Book Notices.

The *American Medical Compend*, Toledo, Ohio, issues a "Byron Robinson Number" for January, 1907. From the long acquaintance of our readers with Dr. Robinson as a contributor to the BRIEF, we feel assured that they will be interested in seeing a copy of this special issue.

MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY. By R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics and Toxicology in Cornell University; and Tracy C. Becker, A. B., LL. B., Counselor at Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo. With the collaboration of August Becker, Esq., Chas. A. Boston, Esq., Hon. Goodwin Brown, W. N. Bullard, M. D., G. C. Cameron, M. D., J. Clifton Edgar, M. D., Jas. Ewing, M. D., E. D. Fisher, M. D., J. C. Johnson, M. D., D. S. Lamb, M. D., H. P. Loomis, M. D., W. B. Outten, M. D., Roswell Park, M. D., J. Parmenter, M. D., Irving C. Rosse, M. D., E. V. Stoddard, M. D., George Woolsey, M. D., J. H. Woodward, M. D. Second edition, Vol. I. New York: William Wood & Co. Price, $6.00 per volume. Sold only by subscription in the full set of four volumes. Can also be had in law sheep at $7.00 per volume.

A great deal of comment has been made of recent times in regard to expert evidence. In the present work the needs of the legal profession are recognized as well as those of the medical. It has long been considered to be the province of the legal portion of a work on medical jurisprudence to set forth only those rules of law which relate to the criminal responsibility of the insane, and the status of medical men when called into court as expert witnesses. Meanwhile, statutes have been passed, and decisions of the courts rendered in all enlightened countries, which have gradually but firmly built up a broad system of law, which defines and governs the legal relation of the physician and surgeon to society. His right to practice his chosen profession has been limited and determined by statutory enactment. His responsibility for due care and skill in the treatment of his patients is considered. His competency as a witness in expert cases has been established by numerous decisions. His right to *just* compensation for services rendered, and medicines and appliances furnished, has been recognized and placed upon the same legal footing as rights arising under any other contracts, but there is no law which governs extortion in regard to services rendered. Will it not be of much advantage to both the medical and legal profession to have at hand a work containing the results of the latest decisions of the courts, and the latest statutory regulations concerning responsibilities. The conviction that both these professions require all of the information mentioned in this work has been the aim of the authors and collaborators. We think they have done their work cautiously and well.

PIONEERS OF PROGRESS. By T. A. Bland, M. D., Author of "Farming as a Profession," "Life of Benjamin F. Butler," "Esau," "How to Get Well and How to Keep Well," "In the World Celestial," etc. Chicago: T. A. Bland & Co. Price, $1.25.

Dr. Bland's work is essentially American, and reflects the various social relations growing out of the true spirit of Christian Democracy. The pages are full of life, action, conversation and character. Nowhere, we are persuaded, can there be found truer word pictures of character in the independent sphere of activity and usefulness. How often would interest waver did not some friend, who knew, depict the life and character of our pioneers. We are treated to so much of the high, strong and intense of the characteristics of men of today that such a work as this is really refreshing. Dr. Bland is himself a pioneer of progress in more ways than one, therefore we commend his work to the youth of today.

GOLDEN RULES OF SURGERY. Aphorisms, Observations and Reflections on the Science and Art of Surgery. Being a guide for surgeons and those who would become surgeons. By Augustus Charles Bernays, A. M., M. D. (Heidelberg), M. R. C. S. (Eng.), Life Member of the German Society for Surgery of Berlin, Chief Surgeon Lutheran Hospital, and for twenty years Professor of Anatomy and Surgery in St. Louis, Mo., U. S. A.; Member Association for the Advancement of Sciences, of the St. Louis Academy of Sciences, etc. St. Louis: The C. V. Mosby Medical Book Co. Price, $2.50.

In years past the author of this work thoroughly elaborated his writings in THE

MEDICAL BRIEF by some of the most intricate surgical operations. We wish to call attention to one of the first important operations by Dr. Bernays, contributed to THE MEDICAL BRIEF January, 1887, as follows: "Gastrotomy for the Removal of a Swallowed Knife. Recovery of the Patient." (fully illustrated). In nineteen days the patient was following his daily avocations as though nothing had happened. We call attention to this to show that the author is worthy of consideration.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially-Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. Kelly, A. M., M. D., Philadelphia. With the collaboration of William Osler, M. D., John H. Musser, M. D., James Stewart, M. D., John B. Murphy, M. D., A. MacPhedran, M. D., Thos. M. Rotch, M. D., John G. Clark, M. D., J. W. Ballantyne, M. D., James J. Walsh, M. D., John Harold, M. D., Edmund Landolt, M. D., Richard Kretz, M. D., etc. Illustrated in colors and black and white. Philadelphia: J. B. Lippincott Co. Price, cloth, $2.00; half leather, $2.25.

Volume II, Sixteenth Series, 1906, is now at hand, and the features that have made it a success in the past are fully apparent. Through all these series the publishers have so well succeeded in the value of the contents of these clinics that today it can be found in all well-appointed libraries, and its pages will show the interest taken in it by the well-thumbed pages. If you do not take these clinics it is worth your time to investigate it.

TOXICOLOGY, The Nature, Effects and Detection of Poisons, with the Diagnosis and Treatment of Poisoning. By Cassius M. Riley, M. D., Professor of Chemistry and Toxicology in Barnes University, and Dean of Barnes College of Pharmacy; Member of American Medical Association; Member of American Pharmaceutical Association. Third edition, revised and enlarged, with illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $1.50.

Any physician or chemist who is personally acquainted with Dr. Riley would expect just such a practical work from his pen. The student will find such practical and useful matter that larger textbooks would rarely be necessary. The busy physician will find it a ready reference book on the diagnosis and treatment of poisoning, and plain statements in connection with the individual poisons and the latest treatments, also the simplest and most easily applied tests for their recognition. This is a practical work by a practical author—theories find no place on its pages.

A MANUAL OF OTOLOGY. By Gorham Bacon, A. B., M. D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York; Aural Surgeon, New York Eye and Ear Infirmary. With an introductory chapter by Clarence John Blake, M. D., Professor of Otology in Harvard University. Fourth edition, revised and enlarged. Handsome 12mo. volume of four hundred and eighty-five pages, with one hundred and thirty-four illustrations and eleven plates. New York and Philadelphia: Lea Brothers & Co., publishers. Price, cloth, $2.25.

The rapid sale of three revisions of this work shows the appreciation in which it is held by the profession. The new edition is greatly improved, new illustrations have been added, and a number of new pages were found necessary owing to important advances. Among the new topics considered will be found Osteomyelitis, Primary Jugular Bulb Thrombosis, and Suppurative Inflammation of the Labyrinth. These, with the re-written chapters on other important matters, make this up-to-date volume valuable, especially in a clinical sense. Have you secured a copy?

THE PRACTITIONERS' VISITING LIST FOR 1907. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and Thirty-Patient Perpetual contain Thirty-two pages of data and one hundred and sixty pages of classified blanks. The Sixty-Patient Perpetual consists of two hundred and fifty-six pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years. Price by mail, postpaid, to any address, $1.25. Thumb-letter index, twenty-five cents extra. Descriptive circular showing the several styles sent on request. Philadelphia and New York: Lea Brothers & Co., Publishers.

CHEMISTRY: GENERAL, MEDICAL AND PHARMACEUTICAL, INCLUDING THE CHEMISTRY OF THE U. S. PHARMACOPOEIA. A Manual of the Science of Chemistry and its Applications to Medicine and Pharmacy. By John Attfield, F. R. S., M. A., Ph.D., F. C. S., etc., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc. New (nineteenth) edition, specially revised by the author to accord with the New U. S. Pharmacopœia, edited by Leonard Dobbin, Ph.D., F. I. C., etc., Lecturer on Chemistry in the University of Edinburgh, etc. 12mo., seven hundred and sixty pages, illustrated. Philadelphia and New York: Lea Brothers & Co. Price, cloth, $2.50.

The revision of Attfield's Chemistry was confided by the author to Mr. Leonard Dobbin, of the University of Edinburgh and Examiner in Chemistry on the Board of Examiners for Scotland of the Pharmaceutical Society of Great Britain. The work has been brought thoroughly up-to-date and to accord with the most recent Pharmacopœias of the United States and of Great Britain. The original plan of the book has been strictly adhered to, as seventeen large editions in the United States and eighteen in Great Britain are an evidence of the approval of the professions of medicine and pharmacy in the two great English-speaking nations of the world.

STOHR'S HISTOLOGY. Arranged Upon an Embryological Basis. By Dr. Frederic T. Lewis, Assistant Professor of Embryology at the Harvard Medical School. From the twelfth German edition. By Dr. Philipp Stöhr, Professor of Anatomy at the University of Würzburg. Sixth American edition, with four hundred and fifty illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $3.00.

Some simplicity has been made in regard to the names that have previously been used; for instance, the following: Instead of saying Lieberkühn's Glands, use Intestinal Glands, and for Brunner's Glands, use Duodenal Glands; for Stenson's Duct, use Carotid Duct; and all similar changes have had recognition to aid the student in memorizing names in accordance with modern views. And in regard to synonyms, this work has suggested the rejection of over five thousand, as soon as possible, and the author has placed on record the rejected names. It may be difficult for the older anatomists to immediately conform to the new nomenclature, yet the author deems it a duty to state the facts. Excellent as the German nomenclature is, as a whole, it is not beyond improvement, and it may be desirable for a committee of the Association of American Anatomists to publish in their English forms a corresponding list of names. The writer has been informed that Messrs. Blakiston's Son & Co. have in press such a list prepared by Prof. Barker, and entitled "Anatomical Terminology." The orderly arrangement of these descriptive names makes the Latin list—and undoubtedly their English version also—an excellent means by which students may review anatomy.

GOLDEN RULES OF PEDIATRICS. Aphorisms, Observations and Precepts on the Science and Art of Pediatrics, Giving Practical Rules for Diagnosis and Prognosis, the Essentials of Infant Feeding and the Principles of Scientific Treatment. By John Zahorsky, A. B., M. D., Clinical Professor of Pediatrics, Washington University, Medical Department, St. Louis; Ex-President of the Bethesda Pediatric Society; Attending Physician to the Bethesda Foundlings' Home; Member of the American Medical Association and of the St. Louis Academy of Science, etc. With an Introduction by E. W. Saunders, M. D., Professor of Diseases of Children and Clinical Midwifery, Washington University, etc. St. Louis: The C. V. Mosby Medical Book Co. Price, $3.00.

Why waste your time in reading long, drawn-out articles on a subject, when short, pithy paragraphs give you the best information? We have before us a work that gives the cream of the subject in short, terse expressions. The author says: "Some favorite ideas are controverted by good authority, but, nevertheless, a book of aphorisms, having personal views back of it, is probably more interesting, if not more valuable, than a compend of undisputed maxims."

ABDOMINAL OPERATIONS. By B. G. A. Moynihan, M. S. (London), F. R. C. S., Leeds. Senior Assistant Surgeon at Leeds General Infirmary, England. Second revised edition, greatly enlarged, with three hundred and five original illustrations. Philadelphia and London: W. B. Saunders Co. Price, cloth, $7.00; half morocco, $8.00.

Only a few months have intervened since the publication of the first edition of this work, and the ready exhaustion of this edition encouraged the author to

give a larger and more complete revised edition. A work of this kind was certainly needed, especially by the progressive surgeon. There are three surgeons who deserve especial mention as contributing to the pages of this book, viz., Dr. W. J. Mayo, Dr. J. B. Murphy and Dr. Mayo Robson. There are manifold advantages thus to be gained in valued thought and scientific attainments. This work will open your eyes along this line of practice.

A TREATISE ON DISEASES OF THE SKIN. For the use of Advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., Professor of Dermatology Jefferson Medical College, Philadelphia, and Clinical Professor of Dermatology Woman's Medical College, Philadelphia. Fourth edition, revised. Philadelphia and London: W. B. Saunders Company. Price, cloth, $6.00; sheep or half morocco, $7.00.

This volume contains one thousand, one hundred and thirty-six pages, with two hundred and fifty-eight text-illustrations and thirty-two full-page lithographic and half-tone plates. About eighteen pages have been added to this revision, yet the work has not been increased in size, owing to the elimination of some matter that was considered not necessary. To further enhance the value of symptomatology and diagnosis—important matters in skin diseases—some new cuts have been added, and since these have been of the more common diseases it lends additional value to the general practitioner, owing to the fact that he treats those diseases of the skin not too complicated, and belonging to the specialist.

A HISTORY OF CHEMISTRY, from Earliest Times to the Present Day. Being also an Introduction to the Study of the Science. By Ernst von Meyer, Ph. D., Professor of Chemistry in the Technical High School, Dresden. Translated with the author's sanction by George McGowan, Ph. D. Third English edition. Translated from the third German edition, with various additions and alterations. New York and London: The Macmillan Company. Price, $4.25.

The history of chemistry proper begins with Robert Boyle, who taught, as its main object, the acquisition of a knowledge of the composition of bodies. The conception of this aim marks the date from which chemistry may be regarded as a science. This merit belongs to an Anglo-Saxon (Boyle). Next comes a Frenchman, named Lavoisier, who gives the stepping stone of advance. Then down through the ages comes Paracelsus, Van Helmont, de la Böe Sylvius, Tachenius, and others of note, came the period of medical or iatro-chemistry, and then from the middle of the seventeenth century iatro-chemistry gave way to other branches. Physical chemistry, with the accompanying doctrine of affinity, has made immense strides, and has greatly broadened its foundations during the last two decades. And the key that opened the whole advance is combined in the elegant pharmaceuticals of today. In going back to the history of the Egyptians, Phœnicians, Jews, and, in fact, other ancient times, we find that these peoples have lain the foundation for the primary knowledge that was used as a basis for future developments.

PREVALENT DISEASES OF THE EYE. A Reference Handbook, Especially Adapted to the Needs of the General Practitioner and the Medical Student. By Samuel Theobald, M. D., Clinical Professor of Ophthalmology and Otology in the Johns Hopkins University; Ophthalmic and Aural Surgeon to the Johns Hopkins Hospital and to the Baltimore Eye, Ear and Throat Charity Hospital; Consulting Ophthalmic and Aural Surgeon to the Home for Incurables and to the South Baltimore Eye, Ear and Throat Charity Hospital. With two hundred and nineteen illustrations and ten colored plates. Philadelphia and London: W. B. Saunders Co. Price, cloth, $4.50; half morocco, $5.50.

The majority of the works published on diseases of the eye are not practical for use by the general practitioner; therefore, when a work that is written along the plain lines of diction such as this one, it appeals to the general practitioner, owing to the fact that he is not a specialist and therefore needs something for his special guidance. When a general practitioner can diagnosticate properly, his knowledge of *materia medica* comes to his aid and half the battle is won. It is well for the family physician to book himself upon all classes of cases, and when beyond his knowledge to call in the specialist and then lend his aid to retain his trade on the family ailments. Every practitioner should add a work such as this to his library for reference.

THE MEDICAL BRIEF

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Editorial.

Talks Plainly.

The editor of the *Medical Fortnightly* talks plainly in the following:

We know that the pharmacist may be profited to a greater degree if the Formulary products should in a measure supplant the proprietaries, but until he mends his ways we have little reason for concern about his interest in the matter; the little corner drug-store, whose name is legion in this city, will prescribe for more patients in an evening than will any physician in the neighborhood in a day; we have all at one time or another suffered from substitution to an extent that makes us somewhat incredulous whether the druggist is in his turn mindful of our material or scientific success—without the druggist the miserable trade in harmful patent medicines which are absolutely secret could not exist. Taken all in all we can not see that we have any call to worry about the profits of the druggists under existing conditions.

The proprietary which has not the merit to stand on will never long continue, and a fight on proprietaries, simply because they belong to that class of remedies, will be unavailing. Nor will the fact that the manufacturer and the dispenser disagree as to who should get the greater profit from the preparation and sale of a product mean much to our profession. Then, again, many of our best and most reliable proprietaries can not be duplicated in the drug store, for the reason that the scientific process of manufacture requires days, weeks, or sometimes months.

Not Caused By a Microbe.

A correspondent asks if, in our opinion, consumption is caused by a microbe, and is tuberculin a cure for it. In reply, I will say, in the opinion of the Editor, consumption is not caused by a microbe, but is a house disease. It is a fact that nearly all menagerie animals die of consumption, and no wild animal not confined ever dies of consumption. In regard to tuberculin, it is a fake and never was

of any value in consumption, and is played out, as the Editor predicted. It is one of the foreign fads that was taken up by so-called scientific men.

Makes Them Profane.

Good roads are a great comfort to doctors.

Ground oyster shells are a good thing to fill holes in the road with.

Communities that have barbarian authorities use whole or unground oyster shells.

This cuts the doctor's tires on his buggy and makes him use cuss words.

So Disinterested.

The schemers who are getting up the very poor imitations of standard proprietary remedies in use by the profession aim to eventually publish a book under the head of Pharmacopœia remedies, which every physician and druggist is supposed to buy.

May we ask who will share the profits of this book?

Queer.

We heard a doctor say he practiced medicine exclusively for the benefit of humanity.

An acquaintance, who overheard the remark, replied to us, "It's queer that this doctor has the reputation of being the best collector in the city."

Standard Remedies the Best.

Don't you think, as a rule, a remedy made by a careful manufacturer, who has his reputation at stake, is liable to be better than a product made by guesswork by every Tom, Dick or Harry?

A Necessity.

People would be surprised to know the large amount of sickness and death caused by bad plumbing. Probably more than any other cause. There is a necessity for schools for plumbing just like there are schools for medicine and dentistry. A plumber should have a diploma just like a doctor and dentist.

The Boards of Health should inspect the hotels, school houses, court houses, and other public buildings. A knowledge of good plumbing should be a part of a doctor's education.

[Written for the MEDICAL BRIEF.]

Trifolium Pratense.

BY J. A. BURNETT, M. D.,
Dean Spring, Ark.

A well-known writer, in speaking of trifolium pratense, which is also known as red clover, said it was deobstructant and sedative, and that the blossoms had long been used in the form of infusion in whooping cough, which they are said to relieve promptly. He considered it a success in the treatment of scrofula, and of value when used as a wash in ill-conditioned ulcers. His dose of the fluid extract was one-half to one drachm, and five to twenty-five grains of the solid extract. The solid extract is applied to cancers, and is thought by some to be a remedy for cancer.

Trifolium is considered to be a good alterative. It is also antiseptic, antispasmodic and deobstructant, and of value in scrofula, syphilis, and various skin diseases. It is of value in spasmodic cough, besides whooping cough, and useful in cough of rubeola, bronchitis, laryngitis, and irritable states of the larynx.

Some authors recommend it for pulmonary troubles in general.

Dr. Cook recommends the following:

Trifolium and ampelopsis, each four parts; stillingia, corydalis, and berberis aquifolium, each two parts, and xanthoxylum bark, one part. He said: "I have used this formula liberally in my own practice, and am justified in urging it upon the attention of the profession for degenerate ulcers, scrofula, and secondary syphilis—having known it to soften and remove gummata without any use of the weakening potassium iodide. I name it 'Trifolium and Berberis Compound.'"

The old alterative vegetable remedies deserve more study, and trifolium will be found to be among the most important of this class of remedies.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
NINTH AND OLIVE STREETS,
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[Written for the MEDICAL BRIEF.]

Rheumatoid Arthritis.

BY WILLIAM MURRELL, M. D., F. R. C. P.,

Physician to the Westminster Hospital and Examiner in the University of Aberdeen.
London, England.

The names rheumatoid arthritis, rheumatic gout, osteo-arthritis, and arthritis deformans are applied to a group of diseases which includes many subvarities, and was formerly believed to be allied to gout and rheumatism, although it has little affinity with either. It is a polyarticular disease, due, probably, to a specific organism. It was at one time regarded as essentially a chronic affection, but is now known to occur as an acute disease. Included under these names are a variety of affections having certain points of resemblance, but not, of necessity, identical, so that a revision of nomenclature has become essential. In this category we now place:

1. The chronic arthritis of middle-aged women.
2. Acute rheumatoid arthritis.
3. Chronic arthritis, with acute exacerbations.
4. Senile osteo-arthritis.
5. Various forms of the disease in children.

The term rheumatoid arthritis is, for convenience, retained as the generic name of the group, but it is open to objection, and probably when our knowledge of the subject is more accurately defined, will cease to be used. It will facilitate matters if the ordinary and more common form is first described.

Chronic Rheumatoid Arthritis.—This occurs most frequently in young and middle-aged women, but is met with in both sexes. Childhood and youth are, to a great extent, exempt; it begins to be common about the age of thirty, and is especially frequent in women at the climacteric period. It is commoner in the poorer classes, but the well-to-do are by no means free. It is often ascribed to exposure to cold and damp, but all debilitating influences, such as defective hygienic conditions, mental anxiety, repeated pregnancies, protracted lactation act as predisposing causes. It sometimes follows in the wake of influenza or endocervicitis and endometritis, or it may be associated with Riggs' disease, and other sore and suppurating conditions of the mouth and gums.

The joints most frequently attacked are those used in sewing, knitting, and other occupations in which women indulge. Its onset is gradual, and there may be a history of general ill-health and bodily depression, possibly with menstrual disturbance. There may be some elevation of temperature, but, at all events, after a short period of malaise and discomfort, there is swelling and tenderness of one or

more of the small joints of the hand. The joints most frequently affected at the onset are the metacarpo-phalangeal, but the knees are involved early. The inflammation subsides with rest and treatment, but after a few weeks it returns, and other joints are affected. The mobility of the joints is impaired, the stiffness being most marked in the early morning, or after a long rest. With rubbing and exercise, the articulations are, at first, rendered more supple, but after a time the movements are materially decreased. There is not much pain, and there is very little tenderness. The articular ends of the bones become thickened and increase in size. Any attempt at movement is attended with grating or crepitus in the joint, which is felt by the patient, or on manipulation. Little by little the disease travels all over the body, until every joint is implicated. The shape and appearance of the joints become altered, partly by the presence of osteophytes and partly by the thickening of the capsular ligaments. The muscles around the joint, and even of the entire limb, undergo a process of atrophy, the wasting being marked. There may be a spurious ankylosis, due not so much to the changes in the articular surfaces, as to contraction of the ligaments and tendons. The condition of the hands is characteristic; they are thin from the absorption of fat and other soft tissues, and the ends of the bones stand out prominently. The fingers are turned outwards, and there is much distortion. All the fingers, with possibly the exception of the little finger, are flexed; the metacarpal ends of the first phalanges are dislocated towards the ulnar side, less commonly towards the radial. As a result of these changes the digits are arranged in an imbricate fashion, one over the other, until the hand assumes the appearance of a bird's claw. The thumb is usually spared, and by its aid the patient succeeds in performing many useful movements after the rest of the hand is rendered useless. Numbness of the skin, tingling, pigmentation, and a peculiar glassy or shiny appearance are common. The disease is slow in its progress, and is made up of a series of acute attacks or exacerbations, each accompanied by fever and followed by increased deformity, until the patient is reduced to the condition of a helpless cripple. After months or years of suffering the acute symptoms may, without any apparent cause, subside leaving the patient with several joints stiff and hopelessly damaged. There is no tendency to cardiac complication, and there is no deposit of urate of sodium in the joints. In many cases the nervous symptoms predominate, and it is not uncommon to find muscular cutaneous and vascular trophoneuroses, with neuritis and exaggerated reflexes. Some writers have been so impressed by the frequency of the occurrence of these phenomena that they have regarded the disease as one of purely nervous origin. Although this is the form of the disease ordinarily met with, there are certain cases which are difficult to distinguish from chronic gout; borderland cases, in which both diseases seem to be present.

Acute Rheumatoid Arthritis.—This is much less common than the chronic form or, possibly, it may be overlooked and confounded with rheumatic fever. It occurs more frequently in girls than in boys and usually commences in the fingers. There is a sudden onset and many joints, including the tempero-maxillary, may be attacked simultaneously. In addition to the joint affection, there are constitutional disturbances, such as elevation of temperature, rapid pulse, loss of appetite, headache, thirst, and constipation. It often runs a very acute course, and may completely cripple the patient in the course of a few weeks. The characteristic symptoms of acute rheumatism are absent, there is no sweating, and no tendency to pericarditis or endocarditis. Some anemia is always observed, but it rarely reaches a high degree of intensity, and but little importance can be attached to it, from the point of view of diagnosis. In the case of a girl, aged twenty-three, who has been for many years under my care, the disease advances by periodical acute exacerbations. The disease is chronic in its effects, but periodically there is a recrudescence of inflammation. These acute attacks occur every three weeks or a month, and precede the menstrual period. Sometimes they are accompanied by tonsillitis. Each attack is accompanied by

greater deformity of the smaller joints, both of the hands and feet.

By some it is maintained that there is no essential clinical or pathological difference between the chronic and the acute forms of the disease. It is urged that the variation in the symptoms of the two forms is simply an indication that the effects of an acute infection are chiefly local synovial inflammation, with rise of temperature; whilst in the chronic case the effects of the virus are more pronounced in the ends of the bones, the cartilages, and the nervous system. There is no sharp line of demarcation between the acute and the chronic forms.

Senile Osteo-Arthritis is a form of the disease met with in elderly people. It attacks the hip, the knee, and shoulder, and may involve the vertebra, giving rise to that condition known as "poker back," or *spondylitis deformans*. It is more common in the cervical than in the dorsal and lumbar regions. In the cervical form the vertebra may be completely locked together by osseous bridges, so that all movement is prevented, and the patient is unable to bend or rotate the head. Sometimes the head is bent forward, so that the chin almost touches the sternum. When the disease attacks the dorsal and lumbar regions, the spine is bent, the body is shortened and twisted, and there may be compression or irritation of the cord, of the nerves given off from it, and of the spinal ganglia. It is in these cases that we meet with shooting pains in the limbs, partial paralysis, and various trophic changes.

There are two varieties, one in which the disease is hereditary, or follows in the wake of an injury, and another in which these predisposing causes are absent. In the former, pain, anesthesia, and muscular atrophy are common, whilst in the latter they are rarely seen. In many cases the onset is distinctly traumatic, a blow or strain producing a slight arthritis, or a definite lesion, such as a detachment of the cartilage, or a dislocation or a fracture into the joint. The inflammation fails to subside, and goes on to the production of deformity. An additional strain is thrown on the other joints and they, in turn, are similarly affected. Sometimes the cause is mechanical, as when the spine is bowed by carrying heavy weights, or when the hands of a boatman permanently assume the position of holding an oar, or of a coachman in holding the whip or reins. In women, the right hand is affected from holding the needle, and the left from the position in which she holds the sewing. The disease is, usually, centripetal in its progress, spreading from the hand or foot to the trunk, but the hip is often involved before the knee.

With regard to pathology, the disease may be described as a degenerative process, consisting of a fibrillation breaking up and wearing away of the cartilages of the joints, accompanied by hypertrophy of the synovial folds at the edges. There is little or no inflammatory change, and it is essentially chronic in character. The hip is often first affected, and there is no accompanying anemia. This affection is sometimes met with in middle age, so that the term "senile," as applied to it is not distinctive. It may supervene on attacks of acute rheumatism, in fact, any diseased joint is liable to become the seat of osteo-arthritis.

In connection with the subject, reference must be made to the so-called *Heberden's Nodes*, which are common in rheumatoid arthritis, and have even been regarded as a special variety of it. These digitorum nodi consist of nodules varying in size from a pea to a bean, situated on the sides of the distal phalanges. They are more common in women than in men. In conjunction with their appearance, the smaller joints become swollen, tender and inflamed, but the larger joints escape. In some cases there is a gouty history, but in others it is absent. The condition is persistent and incurable. They consist chiefly of fibrous tissue and fibrin. In sections of the nodules bacteria have been seen, but their identity has not been determined. The nodules have been regarded as an indication of longevity, but, on the other hand, they are said to be the precursor of cancer. They are closely allied to the rheumatic nodules which occur in children after rheumatic fever.

In children there are two varieties included under the general term rheumatoid arthritis. These are:

1. A form of chronic joint disease described by Still, which is included provisionally.

2. An affection identical with the rheumatoid affection of middle-aged women, which sometimes follows an attack of acute rheumatism.

The form described by Still is a progressive enlargement of the joints, associated with general enlargement of the glands and of the spleen. Girls are more commonly affected than boys, and the majority of cases occur in children under the age of six. The onset is insidious. The child complains of stiffness of one or more joints, which slowly become enlarged, and, subsequently, other joints are affected. Sometimes the onset is acute, with rigors, and elevation of temperature. There is thickening of the tissues around the joints, and there is an absence of osteophytic growth. Creaking is noticed, but there is no actual bony grating. There is little pain and there is no redness or tenderness of the joints. Limitation of movement is always present, and the child is confined to bed. The joints most frequently affected are the knees, wrists, and those of the cervical spine. The ankles, and elbows follow next, but there is rarely any deformity of the hands. The affection is symmetrical, and there is no tendency to suppuration, or to bony ankylosis. The muscles show early indication of wasting. The most distinctive feature is the implication of the lymphatic glands. The enlargement is general, but involves chiefly those related to the affected joints; the glands most frequently enlarged are the supra-trochlear, those along the course of the brachial artery, those in Scarpa's triangle, in the iliac fossa, and in the posterior angle of the neck. Enlargement of the spleen is another characteristic symptom. The heart shows no evidence of valvular mischief, but there is some anemia. There may be pyrexia, and sweating is often profuse. There is an arrest of bodily development, and a child of twelve years of age may be mistaken for one of six. Respecting the etiology of the disease little is known. It may be microbic in origin, but of this there is no proof. It differs from the rheumatoid arthritis of adults in the absence of cartilaginous changes in the joints, in the order in which they are affected, and in the enlargement of the glands and spleen. It is probable that this is not a rheumatoid arthritis, but an infective process characterized by well-marked circum-articular manifestations, but with little implication of either the joints or their cartilages. This form of the disease is uncommon and must be regarded as a clinical curiosity. From careful inquiry I find that many men connected with special hospitals for children in London have never met with such cases. It is possible that they have overlooked them, or have failed to diagnose them; at all events, they are not common.

The second form met with in children is identical with the rheumatoid arthritis of adults, in its typical variety. It presents the same general enlargement of joints, with subsequent bony thickening. There is no enlargement of the glands and none of the spleen.

As to the causation of rheumatoid arthritis, there are good grounds for thinking that the disease is an infection, and that it is due to a diplococcus; an organism of this description was found in the joints of a man who suffered from the disease and died suddenly from another cause. This diplococcus, when cultivated and injected intravenously into rabbits, produced arthritic changes, and was again isolated from the joint exudations. It is not clear that the joint changes observed in these animals were identical with those of man. Von Dengun and Schneider obtained diplococci from the exudate in the joints of a patient who, at the time of his death, was suffering from arthritis deformans, and these organisms grew in all media, although they developed slowly. The injection of these cultures into the knee joints of rabbits gave rise to arthritic changes similar to those of rheumatoid arthritis. Although the exact nature of the organism responsible for the disease is still in doubt, it is microbic in origin. It affects one or two joints and spreads from them, not only to other joints, but to the adjacent structures, such as the muscles and nerves. Moreover, it frequently follows tonsillitis, influenza, enteric, and other infectious diseases. Whilst fully recognizing the fact that rheumatoid arthritis is due to a specific

organism, the influence of certain predisposing causes, such as cold, damp, sunless rooms, and other similar influences, can not be ignored. They lower vitality and induce conditions favorable to the introduction and development of various organisms. Sex and heredity are not without their influence.

The prognosis, in most forms of rheumatoid arthritis, is unfavorable with regard to the prospects of cure. When once developed its duration is, as a rule, limited only by the life of the patient. Usually the termination is by some intercurrent malady, which has but little relationship to the original disease. The senile form is most rebellious of treatment. Sometimes, although not commonly, there is an arrest of the progress of the disease, and when it seems to have done its worst and to have hopelessly crippled the patient, it comes to an abrupt end.

With regard to treatment, there is little to be said, and yet there are many suggestions which might be offered. Of internal remedies, the iodides—quite apart from the possibility of any syphilitic taint—are the most useful, but to be efficacious they must be administered in large doses. Arsenic is another remedy of repute, but its action is slow, and its administration must be continued for weeks, or even months. As a local application, the persistent application of a strong solution of iodine will be found useful. Amongst external remedies, warm baths and hot and cold salt douches may afford some amelioration. It is important to maintain the mobility of the joints, and for this purpose massage and electricity, in its various forms, may be resorted to. Treatment by mechanical or electrical vibration has, in some instances, been followed by improvement. For the relief of pain hypodermic injections of stovaine may be recommended. A residence during the winter in a hot, dry, bracing climate is often followed by an arrest of the disease. Harrogate, Bath and Buxton, in England, and Spa and Aix-les-Bains, on the continent of Europe, are resorted to during the summer months, but in winter Hammam R'Irha is the only health resort readily available, and even that for only a limited period.

Recently, at the Westminster Hospital, I have used a serum in these cases, and it has acted admirably. Provisionally, it may be called the "RA" serum. It is prepared according to the principles of ordinary serums, details of which are given in my article on "Serum Therapy" in the *Enclycopedia Medica*, Vol. 12, 1902. The following case illustrates this mode of treatment:

The patient was a single woman, aged thirty. Her illness commenced at the age of eighteen, with severe pain in the left great toe, the joint of which was swollen, red and tender. This lasted some weeks, but as it got better the left ankle, both knees, the right ankle and great toe, and the finger joints of both hands became, in turn, affected. Two years later she had a similar attack, lasting two or three months. Since then she has never been free from pain and swelling of the joints for more than a month at a time. She has had pains in the joints of the hands and feet, in the ankles, knees, wrists, elbows, shoulders, and more recently, in the jaw. Each attack has left her more crippled. Frequently, the attacks coincide with the menstrual periods, and often she has a sore throat with them. She has been many times in the hospital, has had much treatment, and has been frequently to Buxton, Bath, and Harrogate. The following is a note of her condition in January, 1906: Much deformity of both hands, hyperextension of the interphalangeal joints, partial flexion at metacarpophalangeal, more or less limitation of movements of all, and lateral displacement of some. Thickening, irregular in character, at bone ends. At both wrists ulnar deviation, with some limitation of movement. Much wasting of the small muscles of the hands. Walks without straightening the knees, and with some rigidity of the lower lumbar vertebra; the huddled position is more marked on the left side than on the right. The legs are held in a position of about one-fourth flexion on thighs, greater extension being, seemingly, limited by tendon shortening, flexion unlimited, movement of left ankle abnormally restricted. Some lipping of bone ends, and much deformity of toe joints. Marked limitation of power of opening mouth, with pain on making at-

tempt, so that there is difficulty in mastication. There is creaking in this, as in other joints. A few days later the temperature rose to 102° F., there was a sharp attack of tonsillitis, with inflammation of several of the small joints of both hands, of the left great toe joint, and of the knee, all of which, moreover, were swollen, red and tender. There was fluid in the left knee joint. These acute attacks occurred from time to time.

In addition to the ordinary medical treatment, hot air and Faradic baths, massage and Faradic current to the temperomaxillary joints, were tried but without benefit. On March 15, 1906, and again on the 17th, she had a hypodermic injection of five c.c. of the serum into the abdominal wall; there was no reaction. On the 22d she was given ten c.c., with the usual antiseptic precautions. Three hours later she had a rigor, and the temperature rose from normal to 103.2° F. She complained of feeling ill, pulse rapid, anorexia, nausea, vomiting three times, tongue moist, indented, and covered with white fur. There was diffuse erythema of the abdominal wall for an area of about four inches around the site of injection, and the inguinal glands were slightly enlarged. This condition lasted until the 26th, and gradually subsided. On April 3d, she was given another injection of ten c.c., followed by the same symptoms, which lasted two days. On the 14th, and again on the 24th, she had injections of five c.c., each of which was followed by a similar, but less severe disturbance. On the 16th, the following note was made: "Since the 23d there has been no joint pain. There is now no limitation of jaw movements, and the movements of fingers are freer. The patient stands straighter and walks with less deformity, and greater ease and comfort." No more injections were given, and on May 25 she was discharged, the following note being made: "There has been no return of pain in any joint. Patient now stands almost perfectly straight, and walks with but little restriction, except as regards rate. The knee extension is but little restricted. She has been free from any joint pain for two months. She can not remember having gone so long a time during the last ten years without an attack of acute pain of at least a few days' duration in one or more joints. After the patient's return home I hear from her constantly. In June she wrote "The new treatment has proved more ben eficial to me than anything I have eve had. For three months I have had n pain, and before that I suffered almos continuous pain for four years. I a sixteen pounds heavier than when I cam to London." In September she reporte that she was still further improving, an that her hands were so much better tha she could drive a pony-cart. Soon afte this there was a relapse, and in Decembe she was readmitted to the hospital. Sh was given, subcutaneously, five c.c. o the same serum, followed by a diffuse ery thema and a temperature of 100.5° F which persisted, with but little variation for twenty-four hours. Five days late another injection of five c.c. was given but the reaction was less marked. Afte another five days an injection of six c.c was given, but produced very little con stitutional effect. Three days later th same dose gave rise to a very marke reaction. The injections were continue throughout December, and to the earl part of January, 1907, and the beneficia effects on the joint condition were mos marked, the patient obtaining distinct re lief from her sufferings.

Other similar cases have been under my care, and I have no doubt that this line of treatment affords the only practicable method of cure.

[Written for the MEDICAL BRIEF.]

Syphilitic Disease of the Nervous System.

BY GEORGE OGILVIE, B. SC., M. D. (EDIN.), M. R. C. P. (LOND.),
Chevalier de la Legion d'Honneur,
Senior Physician to the French Hospital, London
and Senior Physician to the Hospital for
Epilepsy and Paralysis, London.
London, England.

No. II.

The discovery of the specific organism which has so long been present to the mind's eye of the pathologist, will do much to advance our knowledge of the syphilitic process, and settle much which now remains doubtful. No over-sanguine hopes for the clinical differential diag

nosis must be attached to its discovery. We know that the question, What is tuberculosis? has by no means been fully settled by Koch's discovery. The presence of the bacillus is not proof of tuberculous disease, while its absence is not proof against the tuberculous origin of the anatomical lesion. Moreover, the *intra vitam* diagnosis of syphilis of the nervous system is not likely to gain materially by the detection of the parasite, and it is the clinical aspect of the question which alone is considered on this occasion.

The diagnosis of syphilitic disease of the nervous system is, to a large extent, a matter of difficulty and uncertainty. Syphilis is a mimicking disease, its manifestations are more or less imitations of other pathological types; it lacks originality. It is this want of specificity in its symptoms which, by a strange contradiction, but according to an old adage, has gained for it the designation of the specific disease *par excellence*. Of such contradictions many more are to be found in syphilography, and, perhaps, none are more striking than that syphilis has been, and is still, considered a "surgical malady." Syphilography has long been, and still is, considered a part of surgery, although there is scarcely any other disease in the whole range of medicine which is so intrinsically "internal," and so rarely appeals to the skill of the *chirurgeon*. Hutchinson once gave it as his opinion that, "had it not been for the unfortunate tendency to recur and become protracted, syphilis might have remained a surgical malady." Yet, he himself describes it as one of the "specific fevers," and classes it with such diseases as variola, measles, and scarlet fever. It seems to me that, like the "specific fevers," or as we would say nowadays, the acute infectious diseases, syphilis never has been a surgical malady, and that the physician has some better-founded claim to it than the surgeon, who bountifully bestows on him all that has the unfortunate tendency "to recur and become protracted." I do not flatter myself that what I say will have the effect of restoring syphilography to its proper place and quarters. But I wish to give expression to a long-felt grievance arising out of a wrong division of labor.

I now return to the syphilitic diseases of the nervous system which should be relegated to the physician, not only for their unfortunate tendency to be obstinate, but also for the difficulty and uncertainty of diagnosis. Here, more than anywhere else, it is true that the diagnosis of syphilis can not be made from a single symptom, but only from a combination of symptoms, or rather from the evolution of the disease. A causal connection between syphilis, and a nervous disorder can not be established by the report of isolated cases, but only by the consideration of large numbers of cases of the same kind. This difficulty of diagnosis is further increased if we turn from the syphilitic diseases of the nervous system to those called parasyphilitic. The definition given of a parasyphilitic affection is, that it is syphilitic in origin, but not in nature. In other words, that it is caused by syphilis, but that it is neither inflammatory nor gummatous. In the case of nervous diseases, the decision whether the disease is syphilitic or parasyphilitic would, therefore, rest entirely with the pathologist, were it not for certain clinical differences by which their nature is said to manifest itself *intra vitam*. Fournier, the foremost protagonist of parasyphilis, gives the following rules by which to discriminate between syphilitic and parasyphilitic affections:

1. The parasyphilitic lesion is "banal," it is not characteristic of syphilis, it is to be met with outside of syphilis, it is produced by other causes, while the syphilitic lesion, such as a mucous patch or a gumma, is "specific," *sui generis*, and is not to be found in any other disease but syphilis.

2. The effect of antisyphilitic treatment on parasyphilitic lesions is said to be either *nil*, or very slow and incomplete, while in syphilitic affections, it is rapid and complete.

At the Madrid International Congress the value of parasyphilis for the retrospective diagnosis of the disease, was one of the subjects under discussion. I tried to show that the principle underlying the distinction between syphilitic and parasyphilitic affections is not only insufficient, but that it is faulty altogether. In its application to hereditary syphilis, in

particular, it leads to consequences which, by themselves, prove its fallaciousness. But this becomes most evident when this principle of division is applied to syphilis of the nervous system. We have seen that all truly syphilitic nervous diseases are "banal;" there is not one which is specific or characteristic of syphilis, not one which may not be produced by other causes as well. And we have also seen that the inefficacy of treatment constitutes no certain proof of the syphilitic nature of the disease. In fact, in syphilis of the nervous system the chances of treatment depend upon the damage done to the nerve substance by the alteration of the connective tissue, and where such damage has been of considerable extent or duration, the effect of treatment will be practically *nil*. It must be remembered that in organic nervous diseases there is a difference between the anatomical and the clinical cure. Specific treatment may heal the syphilitic processes without any amelioration of symptoms, because the nerve-tissue has suffered beyond repair. In nuclear lesions of the third nerve, for instance, consequent upon syphilitic inflammation, it seems that treatment is rarely of any avail, owing to the tenderness and vulnerability of the nervous elements concerned. In all such cases the effect of treatment, clinically speaking, will be negative, while anatomically it may have reduced the process of cell-proliferation to cicatrization. But not in these cases only is antisyphilitic treatment doomed to be powerless, although directed against a lesion truly syphilitic in nature. Take, for example, those rare cases of acute transverse myelitis occurring in the early stages of syphilis. It has long been observed that these cases of sudden onset have a tendency to run a rapid course, and are rarely checked, even by the most energetic treatment. During a marked secondary rash, with more or less rise of temperature—and while under appropriate treatment—the patient develops, suddenly, all the classical and "banal" symptoms of a transverse myelitis and succumbs, although treatment is pushed to the utmost. The *post-mortem* reveals the diffuse changes in the arteries, typical of syphilis. Cases of this class would have both the characteristics of parasyphilis, viz., banality and refractoriness to treatment, and yet be true syphilis. The greater or lesser completeness of the curative effect, its greater or lesser rapidity, are marks too vague and indistinct to build upon them a differentiation of two classes of affections. With regard to the last point, it has been my experience that, unless some improvement is noticeable by the end of the second week, the chances of a cure, whether partial or complete, are small. This is not a hard and fast rule, without exceptions, but with the beginning of the third week the chances certainly become rapidly less favorable. Incomplete cures are so frequent with true syphilis diseases of the nervous system that with some of them, as for instance Erb's spastic spinal paralysis, they are the rule. On the other hand more or less improvement, and even complete cures by treatment have been reported in cases of parasyphilis, and if we are to accept certain statistics, some parasyphilitic lesions, such as tabes and leucoderma, are more frequently associated with a distinct history of syphilis than even the gumma itself. It is the fault clinical principle upon which the whole distinction between syphilis and parasyphilis is based, that leads us into a maze of contradictions. Between the two we are told there exists an "abyss," yet the same author declares that there is no clear line of demarcation between them, that one gradually and continually passes into the other.

Parasyphilis, if not the great "invention" which it has been proclaimed, is not altogether a bad nut. Besides a large bubble of air, it contains a small, substantial kernel. But this, on closer inspection, turns out to be an old friend dressed and disguised in a neologism. Pathological conditions which follow a certain morbid process, from which they derived their origin, without partaking of its nature, have long been known as the *sequela* of a disease, and have formed a difficult and curious field of investigation for both the clinician and the pathologist. It has also long been known that syphilis, like other infectious diseases, may lead to disturbances of a general, or a local character, degenerative processes. Lardaceous disease, frequently caused by syphilis, was

by its discoverer, declared to be "void of all specificity," to be syphilitic in origin, but not in nature. Cachexia, marasmus, pulmonary phthisis, have long been acknowledged as consequences of syphilitic infection, without being part of it, i. *e.*, notwithstanding their banality or want of specificity.

By some authors the term "quarternary" stage, has been coined for these non-syphilitic after-effects of syphilitic infection, while by others they have been called post-syphilitic, meta-syphilitic, or parasyphilitic. Among these last, the choice of the most appropriate term will rest with the learned Athenian. But the thing to be expressed is of great antiquity. In fact, it may be said of parasyphilis that what is certain of it is not new, while what is known of it is not certain. It is certain that there are pathological conditions, syphilitic in origin, but not in nature; but whether all the pathological conditions which have recently been huddled together under this collective name have anything in common, whether in particular they can ever be traced to syphilis as their source, must, to every careful and sober observer, be a matter of serious doubt. To Hutchinson we are indebted for a happy parallel, illustrating the relation in which the sequela of a disease stand to the disease itself. They follow it, he says, as war is followed by famine. The two things differ *toto cœlo*, yet the one is the cause of the other. Hutchinson looks upon the tertiary stage of syphilis as the sequela of the true infectious disease, which, according to him, is represented by the secondary stage. This position, however, seems to me untenable. Tertiaries most decidely belong to the period of active hostilities, to the true specific manifestations of syphilis; they certainly are syphilitic, both in origin and in nature. To continue the same metaphor, the tertiary residues may be compared to the occupation army, which, after the termination of the actual warfare, still keeps the hostile strongholds, and must be considered as part and parcel of the invading force. With regard to parasyphilitic conditions, the simile seems to apply with particular appropriateness. These after-effects of syphilitic infection are generally explained by the action of the problematical toxins of the missing germ. Like all bacteriological theories of syphilis, this is only patchwork made from scraps of evidence, clinical or experimental, taken from other infectious diseases. Surely, no one to-day will feel inclined to subscribe to the saying of one of the great masters, that "syphilis is the key to pathology." With better right it may be said, that all the keys which pathology affords, have been tried in vain in order to "unbar these locks," behind which syphilis hides its true nature.

Two classes of nervous diseases have been described as parasyphilitic, viz., functional disorders and degenerative processes. Among the former we find neurasthenia, hysteria, and epilepsy; among the latter, tabes, and general paralysis. Of certain other affections, such as hydrocephalus, I shall not speak here, because they belong to the congenital form of the disease, and in this paper I limit myself to acquired syphilis. Nor shall I speak of the psychical disturbances, the true psychoses following syphilis.

There is no definite line of demarcation to be drawn between neurasthenia and hysteria. It is, therefore, practical to treat these sister-affections together. That syphilis may be among their causes, exciting or occasionally, there can be no doubt. But if we look through the long list of *agents provocateurs*, which in a neuropathic disposition may elicit the manifestations of these polymorphous neuroses, we find nearly every other morbid state, whether chronic or acute, general or local. It would certainly not conduce to a clearer understanding of their nature, nor to a more convenient nomenclature of nervous diseases, if exactly the same symptoms, or combination of symptoms, would in every case be called after their exciting cause, with the prefix "para." That influenza, tuberculosis, even a simple cold, may, in the neurotic, be followed by nervous disturbances of various description, every one knows. Yet nobody would speak of para-influenza, para-tuberculosis, etc., of the nervous system. That syphilis may act in the same way "needs no ghost to come from the grave to tell us." But to apply the term parasyphilis to these nervous symptoms seems to me, to say the least, superfluous. It is

true that in some cases they outlast the symptoms of syphilis proper, and show no tendency to disappear under treatment; in other cases, however, they vanish with, or even before, the truly syphilitic manifestations, after a short application of specific drugs. Thus, we should be forced to assume two forms of neurasthenia and hysteria, both caused by syphilis; one syphilitic, one parasyphilitic; one amenable to treatment, the other not. Fournier, in his new treatise, devotes a chapter to the functional disorders of the nervous system during the secondary stage, while he also treats exactly the same affections as specimens of parasyphilis in another work. In the former he recommends mercury as the sovereign, the only and certain remedy; in the other he denounces it to be utterly useless, or at least of very slow and incomplete effect. There is an "abyss," we are told, between syphilitic and parasyphilitic neurasthenia. Such a division is forced and artificial, purely theoretical, of neither practical nor scientific value. Syphilophobia, for instance, a not very unfrequent and often a most troublesome complication of the disease, as a rule, outlasts all manifestations of syphilis, and does not yield to treatment in the least; it may also exist without syphilitic infection; it has, in fact, all the characteristics of a para-affection. But exactly the same is true with what the French call *uréthromanie*, a morbid dread of *la goutte*, which occurs with or without gonorrhea. To speak of it as paragonorrhea of the nervous system because it is "banal," and does not give way to astringents, would be preposterous. Yet functional parasyphilis of the nervous system does not rest on more solid ground. It is the nature of the disease which is said to establish the difference between syphilis and parasyphilis, But what is the nature of a functional disorder? *I do not know of any better definition of a functional disease, than that it is one of which we do not know the organic cause.* If, with regard to organic changes of the nervous system, the pathologist can frequently settle the question whether it is syphilitic or not, he must, of necessity, fail where he has to deal with functional disease. It is idle to speak of the "nature" of a disease, or to make the nature of disease the principle of classification, where the inscrutability of its nature is part of its essence.

That functional disorders may accompany and unpleasantly complicate syphilis, there is no doubt. But the frequency with which this occurs must, to a large extent, depend on national, or rather racial, peculiarities, if we compare the reports of French authors with what we see every day in England. A distinguished French neurologist has expressed his opinion that hysteria, in all its different forms, is as common in England as in France, and that statements to the contrary are rather due to the unacquaintedness of English physicians with the picture of the disease, than to a lesser liability of the English to suffer from it. Such a position is altogether untenable. I think it may be safely said that nowadays the picture of the disease, from slight neurasthenic symptoms to the alarming *ensemble de la grande hystérie*, is well known to British physicians, thanks to the remarkably vivid descriptions by French writers. But there can be no doubt that, in the male, at least, hysteria is much more rarely observed with us than with our neighbors. And as hysteria in general is less frequent with us, it is naturally a rare complication of syphilis. In men it is quite uncommon, but even in women it is not a frequent occurrence; and where it is to be found the causal connection between it and syphilis will frequently remain doubtful. I have for a long time given special attention to this point, and with particular interest sought for the objective symptoms of hysteria in the syphilitic. But the result is purely negative. Never have I found the concentric limitation of the field of vision—this classical feature of the hysterical picture—nor any one-sided anesthesia. To find certain areas or patches of diminished sensibility in women is so frequent that it is of no diagnostic value. After protracted medical examination it is always easy to map out such insular spots. But they are artificial products, due to the overstrain of an unduly-prolonged exploration.

Much has been said on analgesia during the secondary stage. But here again my personal experience is negative. Of

course, if the overzealous scientist gets the better of the considerate physician, and continues his pin-pricking or other experiments for a considerable period, he is pretty sure to find what he wants, partly from mental fatigue of the patient, partly even from exposure of the skin to the air. But if these sources of error are taken into due consideration, as they always should be, analgesia will—with us at least—be found to be a very rare associate of syphilis, and where it exists, to have more the character of a complication, or accompaniment, than of a consequence or sequel. Tables have been drawn up to give with much minuteness the characteristic points by which syphilitic analgesia is to be discriminated from the ordinary, *i. e.*, the non-syphilitic form. But here again the distinctions made seem arbitrary and fictitious. When analgesia appears in a patient of hysterical disposition, as a consequence of syphilitic infection, the symptoms in no way differ from those due to other causes, and do not betray their origin by petty peculiarities of localization, intensity or duration.

[Written for the MEDICAL BRIEF.]

A New Operation for Prolapsus Uteri, with Notes of One Hundred and Twenty Cases.

BY J. INGLIS-PARSONS, M. D., M. R. C. P., M. R. C. S.,

Surgeon to Chelsea Hospital for Women, London. London, England.

In the consideration of prolapse of the uterus, we have to regard three main factors: (1) the giving way of the pelvic floor either by rupture or relaxation and stretching; (2) relaxation and stretching of the uterine ligaments; (3) increased weight of the uterus.

In many cases after parturition there is prolapse, due to relaxation of both pelvic floor and ligaments. With most patients it is sufficient to prescribe rest and astringents, douches, tonics, and perhaps the temporary use of a pessary. If the perineum is ruptured it should be repaired, while the enlarged uterus can be reduced in size by appropriate treatment.

The restoration of the pelvic floor in many cases of minor prolapse gives the extra assistance required to keep up the uterus. But in severe cases it is not enough; a gradual stretching takes place after the operation, and relaxation of the vaginal outlet follows from the continued pressure above of the prolapsed uterus. Of the operations on the pelvic floor, that which I find most useful is to remove a triangular flap from the posterior wall of the vagina; the edges are then brought together, and the usual flap-splitting operation on the perineum follows. I have done a large number of cases like this, and as an adjunct to other treatment for procidentia it is, in my opinion, the best of the various operations on the pelvic floor.

When all these measures have been carried out, there still remain some cases where the prolapse persists in spite of the various measures taken to combat it.

It may be impossible to restore the tone of the pelvic floor. Although by operation we can restore its shape, we can not always prevent it from stretching again. Even when the pelvic floor has entirely recovered both shape and tone, the uterus will still come down.

The fault lies chiefly in the uterine ligaments. There are considerable variations in the strength of these ligaments among women, the explanation for which is probably to be found in heredity. I have seen complete procidentia in a single woman with a perfect pelvic floor and intact hymen. In this patient the pelvic floor was complete, but it could not hold up the uterus because the ligaments had given way. In contrast to this we find patients with complete rupture of the pelvic floor lasting for years, and yet the ligaments are so strong that without assistance they are able to hold up the uterus and no prolapse follows.

When operations on the pelvic floor are not enough, ventrofixation may be tried.

In order to form an opinion of the value of hysteropexy for severe prolapse, we must consider the operation entirely apart from retroversion. For the latter condition I am quite satisfied with the operation, but for severe prolapse I am not, and for this reason: to be of any service in prolapse ventrofixation must be done with firm adhesions to the abdominal wall. Before the menopause, this leads

to complications when pregnancy occurs, and after the menopause the abdominal wall is often so lax that it becomes pouched and is dragged down by the descending uterus. This does not apply to retroversion, because there is much less drag on the abdominal wall, and the uterus being suspended and not fixed, can expand if pregnancy occurs.

The treatment which I bring forward is meant to supplement the measures now in vogue, and will be found useful when they fail.

The general idea of the operation is to strengthen the band within the broad ligaments and enable them to hold up the uterus.

This band, consisting of fibro-muscular and elastic tissue, runs upwards and outwards from the cervix to the walls of the pelvis. It has been more particularly described by Dr. J. C. Webster. (*Researches on Female Anatomy*, page 88), Sir William Turner, Dr. H. Savage (*Anatomical Illustrations of the Surgery of the Female Pelvic Organs*), and others.

We are not attempting to form a new ligament as in ventrofixation, but to strengthen one already existing.

The principle of the treatment is simple, and consists in taking advantage of Nature's reparative powers.

When falling of the womb takes place, the process is gradual and may be going on slowly for months, and even years, before there is much descent. As a consequence there is no stimulus for the formation of the lymph which repairs the ligaments when a joint is dislocated.

I decided to supply this stimulus in the treatment of prolapse of the uterus, and trust to Nature to carry out her part of the work by repairing the over-stretched broad ligaments.

The choice of a reagent to effect this purpose required consideration. It should be antiseptic; the effect should be entirely local, and if any absorption takes place it should be harmless.

Sulphate of quinine fulfilled all these conditions. When injected into the cellular tissue of the arm it appears to be precipitated and causes an effusion of lymph, which remains for some weeks. It has the advantage of being strongly antiseptic, and a tonic to the general system if absorption should occur. A solution is injected into the cellular tissue of the broad ligaments from the vagina.

The uterine arteries and veins lying on the inner side of the broad ligaments are not in the way if the needle is inserted at the right point in the vagina; the same may be said of the ureters; while the outer two-thirds of the lower half of the broad ligament contains no veins or arteries of any size or importance, and can be freely laid open from the vagina without having to tie a single vessel. I say this with conviction, because I had the opportunity of examining this space on occasions when doing other operations. It is necessary to lay stress on this point because many of the illustrations in the text-books give the impression that the space is filled with a plexus of veins.

The operation takes only a few minutes, and is free from risk if done with precision, care and antiseptic precautions. There is no rise of temperature. It is essential that the point of the needle should be within the folds of the ligament and in the cellular tissue.

An anesthetic is an advantage because it insures immobility, but it is not a necessity. The patient is placed in the lithotomy position. The vagina, which has been thoroughly douched for some days before, is washed out with a solution of hydrarg. perchlor. one to two thousand. The rectum has, of course, been emptied as well as the bladder. The posterior wall of the vagina is pressed down with a Sims' speculum, while the anterior is held up by a retractor. Even then, in some of these severe procidentia cases, the extreme dilation of the vaginal walls will allow them to roll together in folds and block the view of the cervix. Under these circumstances two lateral retractors are required as well as the other two. The injection is made on each side through the vaginal wall, taking care that the direction of the needle is perpendicular to the base of the broad ligament and parallel to the long axis of the uterus.

The syringe I employ has a long, straight, rather thin but rigid nozzle, so that when it is passed into the vagina the light is not excluded. The needle is an inch in length and rather thicker than a hypodermic. Before the injection is

made it should always be tested, because the quinine solution is apt to cause corrosion and may snap off short. If the patient has not taken an anesthetic she will hardly feel the prick of the needle, but as soon as the injection of quinine begins some pain is felt for a few minutes, the severity of which varies in different individuals. Perhaps this might be obviated by an injection of eucaine. The operation is now over and should not take more than a few minutes. Before the patient is lifted into bed, the uterus should be well anteverted bimanually. A cup and stem india-rubber vaginal pessary, secured by tapes to a band around the waist, is inserted so as to keep the uterus well up until the effusion of lymph has taken place. It can then be removed, as the uterus at the end of four or five days is held up by the effusion.

The strength of the sulphate of quinine solution is important. If too strong it will cause suppuration, and if too weak it will not give sufficient stimulus to repair the ligaments. It is of importance to see that the solution of quinine is accurately made up. The treatment can not succeed if the solution is not right. For the past twelve months I have used a solution of one in five. The amount which is injected will vary according to the severity of the case; but the average amount which I use is sixty to eighty minims on each side for each injection.

After the operation done under anesthesia most patients have no pain. For the first few days there is a slight aching in the pelvis, which then passes off. Nor is there any inflammation. The temperature usually remains normal. The patient should, as far as possible, lie on her face, so as to throw the uterus forward.

In the consideration of each case an estimate must be formed of the amount of strengthening required to hold up the uterus.

For severe prolapse, such as we meet in private practice, but which has not reached procidentia, one injection of sixty to eighty minims into each broad ligament ought to be sufficient.

Among the working classes, when we have to deal with a patient who has chronic procidentia for many years, enlarged uterus, dilated vaginal walls, overstretched pelvic floor and weak general health, who will have to do hard work and constant standing after the treatment is finished, two or even three injections may be necessary to produce a satisfactory result. Our opinion will also be influenced by the reaction of the patient to the injection. The healthy, well-nourished woman will effuse and organize more lymph than the thin, anemic and exhausted mother of a large family.

The most difficult part of the treatment is to estimate the amount required to keep the uterus up permanently. One injection will always do this for a time, even in the worst cases.

But it does not follow that one injection is sufficient. The amount of strengthening must be proportioned to the strain in each case, and this will depend on the weight of the uterus and the condition of the pelvic floor and the duration of the prolapse and the work the patient will have to do. If she has to stand for ten hours a day in a shop or at the washtub, or lift heavy weights, she will require more injecting than a lady who never does more in the way of exercise than an hour's ride on horseback. Again, unless the patient is kept at rest until organization of the exudation has taken place, the operation will fail.

At the end of four days after the injection the pessary can generally be removed, as there is usually enough effusion to keep up the uterus. On examination per vaginam the effusion can be felt in both fornices. It is firm and resilient, not hard, and feels like a hand passing from the uterus to the pelvic wall. The uterus is held up but not fixed and still has mobility.

If a second or third injection is required, the amount of solution injected is reduced to forty to sixty minims. An interval of at least fourteen days should elapse before a second injection is made.

There can be no doubt that the sulphate of quinine is deposited. None of these patients have ever had the least sign of cinchonism, although as much as twelve grains have been injected at a sitting.

When the effusion of lymph has taken place, the next, a very important point for consideration, is this: What treat-

ment shall we adopt to secure organization and prevent absorption? If an injured joint is kept at rest too long, more fibrous tissue than is necessary for repair of the ligaments is likely to take place, and impairment of movement follows.

On the other hand, if passive movements are practiced at an early date and massage is used to increase the circulation through the injured part, this does not occur; repair takes place and the superfluous lymph is absorbed.

If we apply this lesson to the treatment under consideration, the indications are to keep the uterus at rest as much as possible and restrain the circulation through the pelvis in order to promote organization and avoid absorption. This is done by keeping the patient at rest in the recumbent position. It is never possible to keep the uterus completely at rest, owing to the filling and emptying of the bladder, and the movements of the abdomen in respiration.

The benefit derived by patients with chronic procidentia when the uterus is well held up, although apparent when they are allowed to get up, is more marked in most cases at the end of three or four months. The uterus becomes smaller, owing to the absence of the chronic congestion to which it was before exposed. This is particularly observed in the mushroom-shaped enlargement of the cervix. In several cases I have seen the cervix diminish to half its previous size. At the same time the large erosions and profuse cervical discharge gradually clear up. An improvement also takes place in the vaginal walls. Being held up by the uterus they have some chance of recovering their tone. The minor cases of cystocele and rectocele appear to get quite well, while the severe cases which at first ballooned out of the vaginal orifice on the least provocation are, to a great extent, kept in place by a ring pessary, and contract to a quarter of their former size.

For instance, a patient who had procidentia for twenty-five years, had at first to wear a ring for cystocele, although the uterus kept up perfectly. In May of last year the vaginal walls had quite recovered, and I was able to remove the pessary altogether.

The treatment does not prevent or interfere with pregnancy. Six patients became pregnant a few months after the uterus was restored to its normal position. They were able to do their work for the first seven months, and were delivered of healthy children at full term this year without complications. This was what I had anticipated, because the treatment does not impair the normal mobility of the uterus. Although these patients had to do hard work there has been no return of the procidentia. The uterus still keeps up, although not so well as before they became pregnant.

Of the one hundred and twenty cases that I have operated on only five have relapsed to their former condition; twenty-four cases have been improved, while the other ninety-one patients have remained well and the uterus has been kept in its proper position.

In these one hundred and twenty cases, except four, the uterus came outside the vulva.

Ten years have passed since the first patient was treated by this method. She has since been earning her living as a cook, and in spite of continued hard work the uterus keeps up, although when she came to the hospital it was outside the vulva and extensively ulcerated from friction.

The results by this treatment are, on the whole, very good. Most of the patients have been able to resume work and have once more become useful members of society.

[Written for the MEDICAL BRIEF.]

The Treatment of Pulmonary Tuberculosis.

BY W. F. MILROY, M. D.,

Professor of Clinical Medicine and Physical Diagnosis in the University of Nebraska. Omaha, Neb.

The present generally accepted views in regard to the treatment of tuberculosis involve three principal features, viz., rest, fresh air, and forced feeding. The difficulty with this plan is that many persons are not able to submit to this treatment in a thorough way, owing to a variety of circumstances, chiefly financial disability. These things ought to be done as

nearly as possible in every case, for the ideal conditions would be secured, and the nearest approach possible to the ideal should be insisted upon. Since, however, the thorough application of these ideas is impossible very many times, it is still worth while to consider what may be done in the use of other measures.

Formerly, we depended upon various drugs, and the use of cod-liver oil and other reconstructives of that class. I wish to call attention to one remedy, in particular, as, in my opinion, offering something of real value. Some ten or twelve years ago, the late Dr. Pepper, of Philadelphia, called attention to the value of strychnine in large doses in this disease. Acting upon his suggestion, I have made use of the method in a large number of cases. The method, as employed by me, and, in the main, as suggested by Dr. Pepper, is as follows:

The strychnine is given in pill form, beginning with four doses of one-thirtieth of a grain in each twenty-four hours, the administration of the four doses being distributed as equally as can conveniently be done throughout the twenty-four hours. At the end of the fifth day of the treatment the dose is increased, two-thirtieths of a grain being given in one of these doses; the three remaining doses at one-thirtieth of a grain, as before. Five days later, another of the four doses is increased to two-thirtieths of a grain. At the end of each five days the dose is increased, in this manner, until two-thirtieths of a grain are given at each dose; subsequently at the end of each period of five days, the dose is increased by one-sixtieth of a grain, and this periodic increase of the quantity given is continued at the end of each five-day period, until each of the doses consists of the two-thirtieths of a grain, plus one-sixtieth of a grain. All subsequent augmentation of the dose is by the addition of one-sixtieth of a grain.

The indication which I aim to fulfill is to administer this drug until the physiological effects of it are observed in the patient. The quantity necessary to secure this result varies in different individuals, but whether the patient tolerates a large or small amount, it is insisted that the dose shall be pushed to the point mentioned. The evidence of the physiological effect having been reached, which I have observed, consists in muscular contractions seen in one of the three following locations:

1. The muscles of the inferior maxilla, causing a stiffness of the jaw, as patients describe it.

2. Posterior muscles of the neck causing a disposition to throw the head backward.

3. In anterior muscles of the thigh, causing a disposition to lift the feet very high in walking, as if to step over some object.

When any one of these symptoms is observed the dose should be diminished by about twenty-five per cent of the quantity that was necessary to produce the physiological effect which is observed, after which the dose will again be increased, as soon as the contractions of the muscles have ceased, up to a point just short of that which originally produced these contractions. The dose shall then be maintained at that point; but within, perhaps, seven to ten days, it may again be increased, when it will very commonly be found that the amount which before produced muscular contractions will no longer do so, and the dose may again be still further increased.

The point to be borne in mind in this connection, is that a certain degree of immunity to the effects of the drug seem to be established in one who is taking it, and after this has occurred it is important to still further increase the dose, periodically, so as to continually administer the maximum amount that the patient will tolerate.

The physician may be apprehensive lest in crowding this powerful drug in the manner described, he may actually poison his patient. According to my experience, quite a large margin exists between the amount that is necessary to produce the first muscular contractions and the amount that is actually injurious to the patient, so that if care is exercised there need be no danger whatever to the patient in this treatment.

It has always been my practice to explain fully to the patient the nature of the remedy that he is taking and the symptoms that it is important to observe,

and to instruct him to consult me at once, and to diminish the dosage. If the patient is not of sufficient mental capacity to be depended upon to carry out these instructions, I would not favor this mode of treatment, except in cases in which the patient is in a hospital under careful observation.

The effects upon the condition of the patient which I have observed are, in a word, improvement in every symptom in which the patient with this disease may be suffering, viz., with respect to the cough, temperature, the ability to digest food, night sweats, and, in short, the variety of symptoms seen in cases of pulmonary tuberculosis. The quantity which I have administered in one case was three-quarters of a grain each twenty-four hours, for a long period. A friend of mine gave a patient five-sixths of a grain daily for a long period, and to another patient he gave one grain daily for nearly a week without any toxic symptoms.

The effects of strychnine administered to human beings are described as occurring in three stages:

1. The tonic.
2. The convulsive.
3. The paralytic.

The action of strychnine is chiefly upon the nervous system. In its use the aim is to administer the dose to a point just short of the convulsive effect. All of the functions of the body depend for their stimulation upon the nervous system; therefore, if the nervous system is stimulated we find increased frequency and depth of the respirations, increased power of the heart action, with a higher degree of arterial tension, an increase in all the glandular secretions, an increase in the power of the special senses, these being the conditions which are described as representing the physiologic effect of strychnine.

It seems to me that a consideration of these facts offers an adequate explanation for the good results which are seen in the use of this remedy in pulmonary tuberculosis, which is to re-establish a lost resistance and improve the general nutrition of the body.

212 McCague Building.

[Written for the MEDICAL BRIEF.]

Multiple Neuritis.

BY FRANK A. ELY, M. D.,

Professor of Physiology and Neurology in Drake University College of Medicine.
Des Moines, Iowa.

There are many diseases of the nervous system which seldom, if ever, come under the observation of the general practitioner. For that reason it seems best, at this time, to consider a subject which is of common interest to both the general man and the neurologist.

Multiple neuritis is a disease which physicians in all lines of work are apt to encounter, since it is usually the result of an intoxication or infection, and the family physician, and not the specialist, is the one who treats most of the infectious diseases.

We have learned, from our study of therapeutics, that certain medicinal agents, for some unaccountable reason, have an affinity for definite tissues of the body. Toxicology and pathology have shown us that certain organic and inorganic poisons vent their spleen upon the tissues of the nervous system, and, as a result, we have the symptoms of these various intoxications referred to that particular system. The toxines of rabies and tetanus are the best examples of this selective intoxication, especially since the micro-organisms do not, as a rule, migrate from the point of inoculation, but produce their effects through the agency of the poisons which they generate.

In taking up a systematic consideration of polyneuritis, our attention is first directed to the etiology, and the watchwords here are poison and malnutrition. Alcohol, lead, arsenic, mercury, silver, phosphorus and carbon-sulphide are among the common causes. Following this procession, we find autointoxication and the various infectious diseases. Among the causes first named, alcohol and lead are particularly worthy of note, since alcoholic neuritis is apt to be mistaken for tabes; and since lead is very apt to manifest its poisonous effects, first as a musculo-spiral palsy, the other nerves coming under its baneful influence later in the disease.

Autointoxication is fast coming to be looked upon as a disease entity, and it is difficult to predict what the future may evolve from this prolific source. Be that as it may, observation has led the writer to believe that not infrequently a multiple neuritis takes its origin in a simple condition of gastritis or gastroenteritis. In such cases, bacterial agents are probably at work, especially the colon bacillus; but the organisms of putrefaction are also largely responsible for the generation of destruction-dealing toxines.

Among the infectious diseases, typhoid, typhus, the exanthemata, diphtheria and influenza are most apt to be followed by a polyneuritis, and in treating these maladies a sharp lookout should be kept in order to recognize the first intimations of nerve degeneration. Syphilis is not infrequently responsible for its development, either as a result of the toxic influence of the syphilitic virus, or as a result of the depraved nutrition which it has occasioned. Tuberculosis, likewise, appears as a predisposing etiological factor. Various cachexias, such as occur in pernicious anemia and cancer, seem to be accompanied by a multiple neuritis, from time to time. As for the period of life, no age seems to be exempt. In children the disease most frequently follows the exanthemata and diphtheria; in the middle-aged adult, alcohol, typhoid, acute rheumatism, influenza and syphilis; while in old age a marked arterio-sclerotic condition lends a helping hand to any of the various toxic influences previously mentioned. It goes without saying, that any occupation necessitating the constant use of lead, arsenic, or any other poison, is a predisposing influence.

Of late years the microscopist, with his acquired facilities for differential tissue-staining, has done much to clear up our hazy ideas with reference to the pathology of multiple neuritis. In the first place, it has been shown that although most of the structural pathology is to be found in the peripheral nerves, the brain and cord are by no means exempt. The conducting tracks of the cord and the ganglionic cells in its gray matter, as well as the cells in the cerebral cortex, have been found to have undergone more or less degeneration, in some cases; hence necessitating our abandonment of the old term, "peripheral neuritis." Notwithstanding the facts just mentioned, the most interesting morbid changes are found in the nerve trunks. Here we observe, as a rule, a degeneration of the axis-cylinders, which is more marked and complete near the nerve extremities, together with more or less hyperemia of the endoneurium and perineurium. It is worthy of mention that the intensity of the intoxication is indicated by the degree of axis-cylinder destruction; that the destructive process, as a rule, decreases from the periphery to the center; and that in a nerve trunk, extensively involved, some normal axis-cylinders may be found by the side of those degenerated.

As for lesions in the cord and brain, many competent observers have reported cases of diphtheritic and alcoholic neuritis in which the ganglionic cells in the anterior gray horns of the cord have been found in an atrophic and degenerated condition; while many others vouch for like retrograde changes in the cells of the cerebrum and cerebellum. The medulla and pons, like the cord, are subject to degenerative lesions, which may involve the nuclei of the cranial nerves. Hence, the frequency with which a polyneuritis, especially of diphtheritic or alcoholic origin, is attended by cranial nerve symptoms.

The muscles which are enervated by the nerves which have become involved in the neuritic process, become more or less atrophied, and there is, in many instances, an increase in the endomysium and perimysium. The muscle fibers are not uniformly involved, indicating the relationship which probably exists between the unaffected axis-cylinders and the normal muscle fibers. In some cases the excessive proliferation of fibrous tissue between the muscle fibers and fasciculi causes a permanent contraction of the muscle, even after the nerves have undergone complete regeneration.

In attempting to portray the clinical manifestations and individual symptoms of polyneuritis, the clinician is confronted by no easy task, since each form of intoxication has some symptoms which are, more or less, distinct and characteristic. Generally speaking, a multiple neuritis

affects both sides of the body at about the same time. The effect may be more pronounced on one side than on the other, and one side may be affected a little before the other; but one limb or limbs of one side are never singled out, leaving the others intact. In short, the disease is accompanied by a symmetrical involvement of the body. An alcoholic neuritis affects more especially the lower extremities, while a lead intoxication pays special attention to the upper. One case of neuritis will be accompanied by symptoms which are largely sensory, while another will show chiefly a motor involvement. The writer has observed a disposition upon the part of many general practitioners to question a diagnosis of neuritis in which the sensory symptoms, especially those of pain and tenderness along the course of the nerves, are wanting, overlooking the fact that many of the most pronounced cases are unaccompanied by any great disturbance of the sensorium:

In dealing with the symptomatology proper, we will first consider the muscular and motor manifestations, which are, perhaps, the most important among the objective symptoms. Few cases of polyneuritis fail to develop a more or less marked paresis in the muscles of the upper or lower extremities, or in both. Complete paralysis is rare, but almost any grade of motor disability may be produced. This paretic weakness begins at the ends of the extremities and gradually involves the whole of the limbs, and may even invade the trunk muscles. The extensor muscles are first involved, and, as a result, we most frequently find foot-drop and wrist-drop among the early clinical signs.

The extensor involvement in the legs causes an equino-varus position in the feet, and an absolute loss of dorsal flexion beyond a right angle. Bearing this in mind, the gait of these neuritic individuals may be easily understood. Upon taking a step, in order to clear the ground with the drooping foot, the thigh has to be well flexed upon the body. The limp, flail-like leg, is swung forward, and the toes and outer border of the foot first come in contact with the floor. A series of these china-doll movements constitutes the "steppage" gait of Charcot. Not infrequently the muscles in the thighs become extensively involved, resulting in almost total ambulatory disability. The motor symptoms in the upper extremities, especially in lead neuritis, are equally worthy of mention. Here the earliest paretic manifestations usually come within the bounds of the musculo-spiral innervation, and, as a result of the extensor involvement, we notice a marked tendency to wrist-drop. Added to this, we may have the claw-hand, produced by the same accompanying involvement of the median nerve. If the neuritis be a severe one, the muscles of the shoulder girdle and, even of the neck, may be affected.

In determining the amount of degeneration which has taken place in the nerves and muscles, the electrical tests are invaluable. At the beginning we may note an increased irritability upon either faradic or galvanic stimulation. This is very quickly followed by a decreased response to faradism, and a change in the closing galvanic stimuli, the anodal closure causing a stronger contraction than the cathodal. It is important to note, however, that even in the most severe cases a complete loss of electrical irritability does not occur.

As in all other diseases affecting the peripheral motor neurons, we find more or less muscular atrophy. In some instances the muscular wasting is very marked, while in others it is so slight that where all the extremities are affected one finds difficulty in distinguishing between a true atrophy and a general emaciation. As a rule, the atrophy is more marked in the leg and forearm, although the arm, thigh and other skeletal muscles may be equally involved.

Among other motor manifestations may be observed tremors, fibrillary contractions, ataxia and mild inco-ordination. The tremor is coarse in nature, is provoked by voluntary effort, and is more marked when the partially-disabled muscle is fatigued. The fibrillary twitchings are similar to those seen in progressive muscular atrophy, and may be stimulated by spatting the belly of the muscle with a paper-cutter, or the handle of a percussion hammer. The ataxia and inco-ordination may be accounted for on the

ground of muscular weakness, although, as previously observed, the tracts of sensory conduction in the cord may be, in exceptional cases, involved.

Because of the lasting, unsightly deformities which they may produce, the contractures are worthy of our special attention. In early paralysis the flexor muscles seem to claim the right of way. This tendency, which is generally abetted by gravity and the natural anatomic relations of the joint structures, allows the hand or foot to fall an easy prey to the contracting muscular fibrosis, and, as a consequence, the foot becomes fixed in the equin-varus position, or the hand assumes an habitual wrist-drop attitude. These permanent contractures may, in a large measure, be prevented by fixation of the affected part in a normal position, until the fibrous contraction has been overcome.

A study of the reflexes in a case of multiple neuritis only demonstrates those symptoms which might be inferred from the pathology. The cutaneous reflexes may or may not be diminished or abolished. Where marked anesthesia affects the parts, the cutaneous reflexes may be lost. As a rule, they are simply diminished. The tendon reflexes, however, are nearly always diminished to a marked degree in the muscles which are affected. The patellar and Achilles reflexes are usually abolished, as are those of the elbow and wrist. The organic reflexes, which preside over the sphincters of the bowel and bladder, are seldom affected. Hence, we find in this a valuable differential point between neuritis and myelitis.

In passing from a consideration of the motor phenomena, we are next confronted by a series of sensory manifestations, which are of equal import and interest. Not infrequently, the first warning which the patient has of the onset of the disease is a sensation of numbness, prickling or crawling in the ends of the fingers and toes, and in the soles of the feet. After a time, the paresthetic sensations become more marked, and gradually invade the extremities as high as the knees and elbows, and, in severe cases, the whole of the extremities and portions of the trunk may also be affected. After the malady has progressed for a time these indefinite paresthesias are replaced by anesthesia and hyperesthesia. In some cases there will be a marked diminution or loss of the tactile, pain or temperature senses; in others, only one of these modifications of the tactile sense may be missing; or the tactile sense proper may show delayed conduction. On the other hand, the pain sense may be augmented to such an extent that the stroke of a pledget of cotton or the contact of the bed clothes may produce great discomfort. At times, also, a tactile impulse may be misinterpreted by the brain, being construed as a sensation of heat or cold. As previously intimated, many general practitioners lay great diagnostic stress upon the presence of deep-seated pain along the course of the nerve trunk, and upon tenderness on pressure, in the same localities. These symptoms are frequently present, it is true, but are not as characteristic as the same manifestations in the isolated neuritides. Not infrequently the pain and the hyperesthesia seems to be more pronounced in the superficial tissues and in the muscles than along the nerve trunks, leading one to suspect the presence of an accompanying myositis. By far the most common and persistent sensory disorder encountered in these cases is anesthesia. The ends of the fingers and toes are the parts first affected, and the last to recover. It has lately been the writer's privilege to see a case of multiple neuritis following typhoid, in which all four extremities were absolutely anesthetic, and in which the greater part of the trunk, as high as the neck, was likewise affected. The motor paralysis, in this case, was coextensive with the sensory; yet the patient made a rapid and uneventful recovery in about six weeks.

Among the organs of special sense, we find the eye coming in for the lion's share of functional pathology in many of these cases. Especially do we find these symptoms following in the wake of a diphtheritic intoxication. As pertaining to the optic nerve and retina, we may find a papillitis, retracted field for white, or modifications of the color fields. As for the extrinsic muscles of the eye, we may find any one or all paretic, producing any one of the various forms of squint. Errors of accommodation, due to paresis of

the intrinsic eye muscles, are exceedingly common, but modifications of the form and reflexes of the pupil are correspondingly rare. It is important for the diagnostician to remember that the Argyll-Robertson pupil is seldom, if ever, found in a neuritis; hence we have in its presence a distinct indication of tabes, in contradistinction to the form of alcoholic neuritis known as pseudo-tabes.

Aside from the special symptoms heretofore mentioned, we find the general nutrition of the body greatly altered, either as a result of the toxic condition, which has caused the neuritis, or on account of the forced inactivity and altered functionation brought about by the neuritis itself. There is frequently a slight elevation of temperature; the bowels and digestive tract become inactive; the heart's action becomes accelerated, weakened or irregular, and the respiratory capacity may become diminished, as a result of paresis of the respiratory muscles. The cutaneous tissues and muscles showed marked atrophic changes. The skin becomes dry and scaly, or, in rare instances, moist and clammy; about the roots of the nails it takes on a reddish, glossy appearance. Its appendages also share in the nutritional disturbance, the nails becoming hooked and claw-like, and the hair dry and brittle.

Among other interesting morbid features pertaining to the disease under consideration must be mentioned the various mental symptoms which are often developed, especially in cases of alcoholic origin. The psychic changes may precede the neuritic symptoms, but more commonly begin with them and increase correspondingly in severity. The patient first shows an alteration in character and temperament; becomes irritable and querulous, is exacting in his demands, and is inactive and disinclined to mental exertion. There is more or less insomnia, and the night hours are spent in agitation and apprehension. After a time, indefinite and changeable delusions may develop, as a result of which suicidal or homicidal impulses may be exhibited. During the day the patient is more quiet, but toward evening the excitement increases. In the more severe cases delirium may be quite constant. In some patients another type of psychosis is developed, in which the patient loses account of time and place, forgets what he has said but a moment before, and tells fabulous tales, which are cut largely out of the whole cloth of his disordered imagination.

Time will not admit of a more detailed rehearsal of these interesting mental phenomena. Suffice it to say that mental derangement may occur in almost any type of neuritis; but, all things being equal, the alcoholic cases constitute the banner class.

In this paper it will be impossible to describe at length the different forms of multiple neuritis, as they take their origin in the various kinds of systemic intoxication. As has been previously indicated, alcoholic neuritis usually affects the extensors of the lower extremities first. The sensory symptoms are more marked than the motor, and not infrequently the ataxic symptoms are very pronounced, making the disease difficult to distinguish from true tabes. In a lead neuritis the extensors of the foream are first affected, causing wrist-drop. The muscular atrophy is usually well marked, while the sensory symptoms are not so pronounced. A diphtheritic neuritis most frequently begins during convalescence. The muscles of the palate and pharynx are primarily involved, and the cranial nerves, including the pneumogastric, may be affecte' as a result of which death may take place. If the muscles of the lower extremities become paretic, the Romberg symptom may be developed. In this type of neuritis sensory disturbance is not marked.

Although the diagnosis of multiple neuritis is not particularly difficult when the disease is thoroughly established, its recognition is frequently not at all easy at the onset. When a history of chronic intoxication has been obtained, and we have added to this a gradually-progressing, symmetrical, sensory and motor involvement of the extremities, accompanied by foot-drop and wrist-drop, a provisional diagnosis of neuritis can be made. When, in a short time, muscular atrophy develops, and the skin about the nails takes on its characteristic glossy appearance, and tenderness of the muscles and nerve

trunks can be excited upon pressure, the diagnosis may be made positively. There are, however, several conditions which may be quite difficult to exclude, viz., poliomyelitis, tabes, myelitis, and hysteria. As for poliomyelitis, we find it occurring more frequently in children, while multiple neuritis is, ordinarily, a disease of adult life. A poliomyelitis is more abrupt in its onset, affects the whole of one or more extremities at once, in place of beginning at the ends and slowly extending toward the trunk, and in a short time the extremity last affected shows signs of improvement, and may have partially recovered before the others have begun to improve. Sensory symptoms are seldom and mental symptoms never observed. In recovery from multiple neuritis the sensory and motor symptoms gradually withdraw from the trunk and proximal portions of the extremities toward the fingers and toes, but the withdrawal, like the invasion, is quite symmetrical. Of the two diseases, poliomyelitis is more frequently followed by permanent deformity.

In distinguishing multiple neuritis from tabes, the examiner will oftentimes experience great difficulty. Among the most important differential diagnostic points should be mentioned the Argyll-Robertson pupil, which is never present in neuritis; the presence of muscular atrophies and reactions of degeneration, which are not observed in tabes; the recto-vesical disturbance, which develops early in tabes, but is observed very late, if at all, in neuritis, and the period of development, which covers years in tabes and only weeks or months in neuritis. To these might be added other distinguishing points, which, however, are of much less value. In stepping the tabetic strikes his heels first, the neuritic his toes and the outside of his foot. The tabetic has a girdle sensation, lancinating pains, and gastric crises; while the neuritic has no girdle sensation; as a rule, no abdominal pains, except from digestive disturbance, and the pain in his extremities is more of a rheumatic ache than the stabbing, shooting pains of tabes.

In discriminating between myelitis and multiple neuritis, we observe in the former a distinct tendency to paraplegia, with girdle pains, retained electrical responses, exaggerated reflexes, recto-vesical disturbance, and a tendency to bed sores, all of which conditions point to a cord lesion, and not to involvement of the nerve trunks.

Last, but not least, among the differential diagnostic troubles, comes hysteria, whose omnipresence brings a sprinkling of white to the clinician's head. Hysteria and neuritis may coexist in the same individual, or the former may simulate the latter. To the skilled observer there should be little chance for error. The psychic pain of hysteria is not confirmed by the facial expression. The anesthesias seldom involve the four extremities, and do not correspond to definite groups of sensory nerves. The deep reflexes and electrical responses are normal, and genuine atrophy is not observed.

Before leaving the subject of diagnosis, it may be well to state that one of the most difficult problems to solve in some of these cases is the origin of the intoxication. Cases of alcoholic neuritis have been observed as the result of the prolonged use of various medicines in which liquor is the chief ingredient. Lead neuritis may follow the continued use of certain cosmetics, to say nothing of the frequency with which it occurs in those who are engaged as painters and decorators. The history of previous infectious diseases should always be brought out and given careful consideration before excluding neuritis.

Having gone quite extensively into a consideration of the symptomatology and diagnosis, it now remains for us to consider, briefly, the prognosis and treatment. Generally speaking, the prognosis of multiple neuritis is good. Most cases recover completely, while others develop post-neuritic contractures and deformities. Diphtherial neuritis is, perhaps, the mildest form, and complete recovery is quite certain if the individual survives the first few days. Lead palsy, itself, is responsible for few deaths, but not infrequently the depraved nutrition of the individual, which has resulted from prolonged poisoning, lays him liable to the ravages of intercurrent diseases. Neuritis of alcoholic origin is the type most frequently followed by death. This can be largely accounted for on the ground that these

alcoholic individuals have a lowered power of resistance, and are usually suffering from organic changes in the nervous system, blood vessels, and liver. Neuritis, following autointoxication, is frequently quite protracted in its course, owing to the difficulty in relieving the digestive trouble, which is the primary cause. When a multiple neuritis begins suddenly and progresses rapidly, there is great danger of pneumogastric involvement. Hence, the prognosis should be guarded. In instances where the progress is very slow, a very prolonged course should be anticipated.

In treating multiple neuritis, our first thought is to remove the cause. If alcohol is the "nigger in the woodpile," put your patient in a hospital and enforce total abstinence, since it has been proven impractical, even in Iowa, to prohibit the maintenance of the woodpile. If lead is the offending agent, it should be eliminated by the administration of iodides, and by increasing the activity of the bowel, skin and kidneys. Change of occupation is, of course, imperative when its pursuance necessitates the handling of lead in any form.

In an autotoxic neuritis the gastro-intestinal tract should be frequently spurred to activity by the use of calomel, castor oil and copious enemata, and the various intestinal antiseptics should be employed, among which sulpho-carbolate of zinc, probably, holds first place.

In caring for the general physical condition of these individuals, it is found that rest is a very important factor. The parts affected should by all means be put at rest. Nutrition may be stimulated by gentle massage, but violent manipulations in the early stages are not to be employed. If contractures appear, the physician should exercise his ingenuity in contriving splints and various forms of apparatus to hold the affected parts in normal positions, and should resort to frequently-repeated passive movements to overcome abnormal contractions. Where patients suffer from considerable pain, the use of opiates and hypnotics may be called for, but should be used very sparingly. During the later weeks of the disease full massage and the interrupted galvanic current should be made use of, the individual atrophic muscles being kneaded deeply to encourage elimination and circulation, and repeatedly contracted by opening and closing the galvanic current. As a rule, after the toxic cause has been eliminated, a general tonic, in combination with cod-liver oil, is very beneficial.

Citizens' National Bank Building.

[Written for the MEDICAL BRIEF.]

Hoarseness.

BY J. A. WATSON, M. D., C. M.,

Professor of Laryngology, Medical Department, Hamline University, Minneapolis, Minn.

It is, perhaps, not strictly a scientific method to choose a symptom as the subject matter for a study, and reason backward, as it were, from the symptom, which is an effect widely different to the underlying pathological conditions, which are its causes. It is a method, however, which is not without its uses, and it is hoped, in this instance, that it will serve to impress upon the general practitioner the varying, but unfortunately often underestimated import of the symptom which is the subject matter of discussion. The press of apparently much more serious practical problems, the general practitioner's lack of training and skill in the examination of the organ of voice and the mechanism of voice production, the very great variety of conditions upon which this symptom depends, and the very fact that in the majority of instances the underlying lesion is of but slight importance, all combine to cause a tendency toward the taking of what may appear to be slight risks in this direction, but which, unfortunately, result not infrequently in grave errors and, occasionally, in terrible catastrophies.

The common and important causes of hoarseness, under which term we include for convenience's sake the varying degrees of aphonia, are:

1. Simple acute laryngitis.
2. Simple chronic laryngitis.
3. Diphtheritic laryngitis.
4. Odema of the larynx.
5. Tuberculosis of the larynx.
6. Syphilis of the larynx.
7. Neoplasms of the larynx.

8. Hysterical aphonia.

9. Paralysis of the larynx.

It is, no doubt, true that the throat expert can usually save himself considerable trouble and make an immediate and correct diagnosis of the cause of hoarseness by simple laryngoscopic examination, but the general practitioner, whose opportunities are more limited, and who, unfortunately, often fails to use such opportunities as he does possess, will tread more safely by approaching the case more cautiously, and making careful inquiry as to the history and symptoms before proceeding to the objective examination of the throat. He should closely note the following data, and allow none of them to escape his attention:

1. The duration of the hoarseness prior to the time of examination.

2. Its mode of onset (gradually or suddenly).

3. Whether accompanied by pain, soreness, cough, dyspnea, dysphonia or dysphagia.

4. The patient's family history and personal history; inquire especially whether any specific infection, or whether exposure to tuberculosis or other infectious disease. The occupation and mode of life often have an important bearing on the question.

5. The state of the patient's health prior to and subsequent to the onset of hoarseness; particularly should he satisfy himself as to whether there have been any of the general evidences of syphilis or tuberculosis.

6. The patient's general condition at the time of examination; temperature, pulse, respiration and condition of the nervous system should especially be noted. Evidences of hysteria should not be overlooked. It is not contended that it is necessary always, and at all times, to inquire about each and all of the preceding data, since not infrequently a certain history or symptom, or combination of symptoms, establish so strong a suspicion of some certain condition as to justify an immediate examination of the throat, an examination which may at once clinch the diagnosis, even though the examiner be by no means an expert.

A general adherence to this plan of examination, however, will, in the light of the diagnostic facts stated below, establish, after a little practice, a healthy skepticism of attitude that will minimize the possibilities of error. Having obtained such information as to the data suggested, it is now the physician's duty to examine the throat, especially the larynx, objectively. In this age no general practitioner who is unable to do so is properly equipped for his work. It is not difficult to acquire a degree of skill that will enable one, with a little perseverance, to succeed in eighty-five per cent of his cases, and it may be laid down as an inflexible rule that any physician who allows a case of definite aphonia to persist longer than two weeks without either himself obtaining a clear and sufficiently prolonged view of the interior of the larynx, or referring the case to some one who can do so, is remiss in his duty towards his patient.

1. The hoarseness of acute laryngitis usually appears rather suddenly. It persists seldom shorter than two, and seldom longer than ten days. There is nearly always a history of cold, of wet feet, or of other exposure, or of having lately breathed an atmosphere laden with irritating vapor, or of over-use of the voice. When there is no such history and the case still proves to be acute laryngitis, it will commonly be found that the patient is quite subject to such attacks. There is usually a feeling of dryness or irritation in the throat and a slight cough; there may be a little malaise and, perhaps, slightly elevated temperature. On examination, the mucous membrane of the larynx is seen to be more or less swollen and reddened with enlarged and injected vessels. The cords have lost their pearly white appearance, and are sometimes intensely congested.

2. The hoarseness of simple chronic laryngitis is seldom as marked as that of the acute form. There is usually a huskiness or coarseness in the character of the voice, rather than an actual aphonia; a sudden and more or less frequent breaking of the voice, or loss of tone production for the moment, is, however, a fairly good evidence of the condition. The continued attempt to use the voice, in spite of the condition, often causes a sense of fatigue. Sometimes the voice, though husky on commencing to speak, clears up after a few minutes, and the speaker is able

to continue comfortably. There is often a history of repeated acute attacks. Very commonly, however, there is no such history, the chronic condition having been established gradually. The disease often occurs in singers, public speakers, and others whose occupation causes excessive, prolonged, or improper use of the voice. It will be found that in a large proportion of these cases there is some condition causing chronic stenosis in the nasal chambers, and more or less mouth breathing; again, there are often hypertrophied tonsils or other pathological condition in the pharynx. On inspection of the larynx some hyperemia is to be observed, though the cords themselves are occasionally quite white and pearly; very frequently the mucous membrane is quite thickened, especially the arytenoid commissure and posterior wall of the larynx.

3. It is scarcely necessary to do more than merely refer to diphtheritic laryngitis as a cause of hoarseness, since there are almost invariably, in these cases, such a combination of symptoms as to at once arouse a strong suspicion of the condition, a suspicion that when once aroused is usually easily confirmed by laryngoscopic examination, or, where this is impossible, as often happens in children, by bacteriological examination. Cases of primary laryngeal diphtheria are occasionally seen in which there are no objective appearances in the fauces suggestive of the condition of affairs, but the constitutional condition, the severity of the local symptoms, and the all too frequent appearance of dyspnea, will alone render the diagnosis fairly certain.

4. The hoarseness of edema, except at the very beginning of the attack, is usually lost sight of in the presence of symptoms of over-shadowing importance. These symptoms, especially the dyspnea and the laryngoscopic image, commonly render the diagnosis painfully plain. Every general practitioner should bear in mind the probable circumstances under which edema of the larynx is likely to occur. They are acute laryngitis, but only occasionally and in very severe cases, severe infectious inflammations of the throat, operations about the base of the tongue (the writer had a case occurring in his practice after a slight cauterization of the laryngeal tonsil); tuberculosis and syphilis of the larnyx; Bright's disease.

5. The hoarseness of tuberculosis is usually insidious in its onset. There is a peculiar softness and lack of tone to the voice, differing from the metallic harshness of certain other conditions. There is nearly always pain, or at least dysphagia, but sometimes not until late in the disease, long before which time the diagnosis will probably be made. The time at which pain or dysphagia appears depends upon the time at which the stage of infiltration yields to that of ulceration, and upon the portion of the larynx affected. Involvement of the epiglottis and upper portions of the larynx causes severe and early dysphagia. There are nearly always evidences of primary lung involvement, and the ordinary general symptoms of tuberculosis are seldom absent, especially pyrexia and loss of weight. The mucous membranes of the throat are apt to look pale and anemic; some portion or portions of the larynx are more or less swollen from infiltration, most commonly the arytenoid commissure, next in point of frequency the artenoids, the aryepiglottic folds, the false cords, the true cords, the epiglottis. If the stage of ulceration is reached, the ulcers are irregular in outline, apparently flush with the surface, covered by gray or white secretion, and surrounded by pale mucous membrane. Bacteriological examination of the sputum nearly always reveals the presence of bacilli, except, perhaps, in the very early stages.

6. The hoarseness of syphilis is usually harsher and more metallic in character than the last variety; it is seldom accompanied by much pain or dysphagia, though these symptoms are occasionally marked. The laryngoscopic appearance depends on the stage of the disease. Generally speaking, the mucous membrane has a redder and more inflamed appearance than in tuberculosis. The ulcers are deeper, more regular in shape and surrounded by an inflammatory areola. The history and the effect of treatment clinch the diagnosis.

7. The hoarseness of neoplasms varies much in character and in accompanying symptoms, depending on the site, the size, the stage, and the character of the growth. The presence of a neoplasm may be sus-

pected from the symptoms, but can be determined with certainty only by the laryngoscope. A discussion of the differentiation between the various new growths that are found in the larynx is aside from the purposes of this paper. Suffice it to say that the presence or absence of malignancy should be established at the earliest possible moment.

8. Hysterical aphonia may be diagnosed by the fact of its occurrence in hysterical subjects, by the absence of tuberculous or syphilitic history, and of organic changes in the larynx. One peculiar and diagnostic feature is the fact that while the voice may be completely lost the patient is still able to cough. The laryngoscope reveals the fact that while there is no actual paralytic condition, the cords approximate only imperfectly, and, as it were, hesitatingly; a well-marked chink remaining, in spite of an apparently determined attempt at phonation. If brief approximation occurs it is not long enough in duration to enable the patient to produce a distinct sound.

9. The hoarseness of paralysis usually appears suddenly. It is often quite complete in the early stages, while later the patient may regain, to a certain extent, the power of tone production. In abductor paralysis the hoarseness may be accompanied by dyspnea. A satisfactory diagnosis can be made only by obtaining a view of the interior of the larynx, in which case it will be seen that one cord, or perhaps both, fail to a greater or lesser extent in the amount of abduction or adduction, or of both, in which latter case the cord remains in the cadaveric condition.

Every physician should bear in mind and appreciate the circumstances under which laryngeal paralysis is likely to occur, more especially aneurisms, neoplasms, or syphilitic or tubercular infiltrations, so situated as to involve the fibers of the recurrent laryngeal nerve in any portion of its course.

1034 Andrus Building.

Enclosed find one dollar for my renewal. I like the BRIEF more than all other journals.—D. E. REED, M. D., Portland Mills, Ind.

[Written for the MEDICAL BRIEF.]

Psoriasis.

BY JOHN V. SHOEMAKER, M. D., LL. D.,

Professor of Materia Medica Therapeutics, Clinical Medicine and Diseases of the Skin, in the Medico-Chirurgical College and Hospital of Philadelphia. Philadelphia, Pa.

The pátient under discussion in this article is a typical case of psoriasis of five years' standing. This disease is usually defined as a chronic inflammatory cutaneous disease, characterized by an outgrowth of the epithelial layers of the skin, and generally appearing as slightly-elevated, round and reddened patches of various sizes, covered with dry, white scales.

In order to ascertain the probable cause of this man's trouble, we have taken a rather careful history, which reads as follows:

Mr. D. A., aged twenty-six years; nativity, America.

Chief Complaints.—Pain in the limbs at night, especially so whenever he had been exposed to rain or dampness during the day. Headache, anorexia, flatulence and constipation.

Family History.—His parents are both living and well, except the father has chronic rheumatism. One brother died in infancy. Two brothers and three sisters are living and in good health. Accordingly, to his knowledge, there is not one in the family who had ever been afflicted with the same disease. The family history is also negative as regards cancer and tuberculosis.

Previous Personal History.—When he was a child he had whooping cough, diphtheria and scarlet fever, rheumatism at the age of sixteen years, and typhoid fever at the age of twenty-two years. Denies venereal diseases.

Social History.—He is single; lives with his parents.

Occupation.—Carpenter.

Habits.—Drinks from three to five glasses of beer daily. Chews tobacco excessively, but does not smoke. He is a heavy eater, especially of meats and pastry.

Present Illness.—Five years ago he had a severe pain in his right elbow joint. In a week's time after the severe pain in the elbow joint, a small red papule appeared on the extensor surface, near the

elbow, on the right forearm. There was slight desquamation over the surface of the papule and the skin around it. More papules developed near the first papule, which coalesced and formed the present area of infiltration with desquamation. Soon similar patches were found on the scalp and back; the knees and legs were also gradually involved with characteristic patches of infiltrated skin. The involved parts constantly annoy him by an itching condition, so much so that occasionally at night he is unable to sleep.

Physical Signs.—A general examination shows a male, five feet eight inches tall, weighs one hundred and fifty-two pounds, is muscular and well developed. The skin is normal in appearance, except the extensor surface of the forearms, legs, and on the back, where numerous areas of infiltrated skin exists, covered with dry, white scales. Around the infiltrated condition of the skin are many reddish papules, also covered with white scales, and in many instances are in the process of coalescing. The patient's tongue is coated heavily and his breath is very offensive. The hair is dry, coarse, and falls out freely, showing an abnormal state of the skin and its glands. The lymphatic glands appear normal, and nothing abnormal can be elicited over his chest and abdomen.

Diagnosis.—The diagnosis of psoriasis in this patient is easy, because of the chronicity of the affliction, and from the history of the onset. It appeared as a small, reddish papule, became covered with the characteristic white scales; other papules followed on the extensor surface of the extremities, and on the back, which coalesced and formed thick, infiltrated, desquamating areas of the skin.

Psoriasis usually attacks the extensor surfaces of the body; begins as a papule, followed by many more, which coalesce and form sharply-defined patches, as just described. An eruption of the skin presenting the symptoms, the onset, the duration, and the course, as in this patient, could not possibly be due to any other affection.

The diseases of the skin which psoriasis often most resemble are eczema squamosum, syphilis, and seborrhea sicca, but the differential points of these affections with psoriasis, as tabulated below, will readily assist in making a correct diagnosis:

Psoriasis.	Eczema Squamosum.
(1) The primary lesion begins as papule, covered with whitish scales.	(1) The primary lesion begins as an erythematous patch, a vesicle pustule or moist spot.
(2) Itching slight, rarely intense.	(2) Itching intense.
(3) Affected areas, sharply defined.	(3) Affected areas gradually fade into healthy skin.
(4) Areas occur both large and small, and are usually round.	(4) Areas are large and irregular.
(5) Involves with preference the extensor surfaces.	(5) Involves with preference the flexor surfaces.
(6) The lesions often remain unchanged for months.	(6) The lesions rapidly change.
(7) Eruption is always dry.	(7) Eruption usually is moist.
(8) Areas are covered with many white scales.	(8) Areas are covered with small yellowish scales or with crusts.
(9) The course is chronic.	(9) Course is either acute, subacute or chronic.
Psoriasis.	**Syphilis, Squamous.**
(1) History negative.	(1) History of primary lesion.
(2) History of rheumatism, gout or gastro-intestinal catarrh.	(2) History of sore throat, syphilitic fever and other concomitant signs.
(3) Extensor surfaces of arms and legs nearly always involved.	(3) Extensor surfaces of arms and legs, rarely if ever involved.
(4) Lesions regular in outline.	(4) Polymorphous arrangement of lesions.
(5) Scales are shining silvery-white and abundant.	(5) Scales, dirty yellow and few.
(6) Itching slight.	(6) Itching entirely absent.
Psoriasis.	**Seborrhea, Sicca.**
(1) Eruption in areas of entire scalp.	(1) Eruption usually involves the scalp, over the top of the head only.
(2) Scales dry and silvery-white.	(2) Scales yellowish, fatty and greasy to the touch.
(3) Scales consist of epithelial cells.	(3) Scales consist of dried sebum.
(4) Base of eruption is inflammatory and infiltrated.	(4) Base of eruption is anemic.
(5) Eruption also over the body and extremities.	(5) No eruption over the body.

Pathology.—A section of the involved skin, under the microscope, shows a hyperplasia of the mucous layer, and of the normal constituents of the rete malpighii. The increase occurs chiefly in the intercapillary portion of the layer, which, growing downward, gives the appearance of increased size, which is not found to be increased upon close examination. In the advanced stages of the affection, the superficial blood vessels of the corium become dilated, migration of the white corpuscles follows, and the connective tissue and the blood vessels of the corium become the seat of round-cell infiltration, which, together with effused serum, di-

vides the connective tissue into open meshes. There is no involvement of the sebaceous and sudoriferous gland, but there is hyperplasia of the external root of the hair, extending into the cutis.

Etiology.—Psoriasis is as common among the wealthy as among the poor, and in all walks of life. I believe that gout and rheumatism and local irritation to the skin, in those predisposed to the disease by some constitutional condition, are the chief etiological factors. Some claim it to be hereditary, and to follow scrofula, syphilis, and other constitutional diseases, which leave the blood in an impoverished condition. My knowledge and experience in treating the disease does not warrant the belief of the microbic theory as the cause of the disease.

Treatment.—This disease, by many physicians, is thought to be incurable, and probably is so in their hands, because they are not persistent nor rigid enough with the patient in following out the treatment. The disease is curable, but it often requires a most persistent and skillful treatment for months, and sometimes for years. Careful attention must be given to hygienic measures, as well as to the external and internal medication. The physician's aim should first be to seek the cause and remove it.

Treat the cause, whether it be rheumatism, gout, or gastro-intestinal catarrh, and remove it, if possible.

In this patient I believe the chief cause of the trouble is due to his rheumatic diathesis. He gives a history of having had rheumatism, and at present has pain in his limbs and joints at night. His tongue is coated, but I do not think that he has much disturbance of the gastro-intestinal canal. However, I will begin his treatment with a tenth of a grain of calomel every half hour for fifteen doses; the following morning he will be requested to take an ounce and a half of a saturated solution of magnesium sulphate. After his bowels have been thoroughly emptied I shall prescribe a capsule containing:

℞ Olei Gaultheriæ.....3 minims.
Sulphuris Precipitati .....3 grains.
Phenylis Salicylatis .....2 grains.

Misce, fiat capsula No. 1. Mitte No. 30. Sig.: One capsule four times daily for three (3) days, then two capsules four times daily.

Externally he needs a stimulating ointment to the parts affected. Salicylic acid in combination with mercury, is one of the best applications to lessen the infiltration, and stimulate the skin to its normal functions. Therefore, I will give him an ointment containing:

℞ Acidi Salicylici.....1 drachm.
Unguenti Hydrargyri Nitratis... ½ ounce.
Unguenti Aquæ Rosæ..... ½ ounce.

Misce, fiat unguentum. Sig.: Apply locally to the affected condition of the skin, twice daily.

Of course, medicine alone, without attention to hygienic measures and diet, will not cure these patients. The functional activity of the skin, alimentary canal, and the kidneys should be increased, so that the blood may be depurated and oxidation promoted. The bran baths are especially valuable in psoriasis, to soften the skin and loosen the scales. From two to three pounds of bran to a water tub half full, is sufficient.

The diet must be plain, well-cooked, and easily digestible. The excessive use of coffee, tea and highly-spiced food must be avoided. Alcoholic beverages of all kinds is also interdicted. The kidneys and bowels must be kept active by appropriate diuretics and laxatives.

1519 Walnut Street.

[Written for the MEDICAL BRIEF.]

A Few Words Concerning Post-Partum Hemorrhage.

BY O. S. VINLAND, M. D.,

Professor of Anatomy and Venereal Diseases in the Denver Homeopathic Medical College.
Denver, Colo.

Despite the statement of some writers that *post-partum* hemorrhage does not occur in well-managed cases, the fact remains that it does occur not infrequently, and under most careful management.

It is believed that chloroform is a predisposing factor, but this is not borne out by the writer's experience. In four recent cases of *post-partum* hemorrhage chloroform was used in one case only. In other cases, where that anesthetic was used to complete narcosis, hemorrhage did not occur. Undoubtedly the most usual cause for this accident is retained parts of the secundines.

Too hasty delivery of the placenta, I believe to be a cause for *post-partum* hemorrhage. The reason for it would seem

to be the sudden emptying of the uterus before it has had time to react from its effort in expelling the child. Other causes are numerous. In the four cases mentioned, chloroform, being used in one, may be ascribed as the cause.

In this case, a primipara, aged thirty, there was some pelvic deformity. The child was unusually large and labor was difficult and protracted. The patient was nervous and anemic. Chloroform was used extensively, at intervals, for about ten hours, although there was never profound narcosis. In this case I believe that chloroform was a predisposing factor, in that it aggravated the relaxed condition of the uterus, caused by the prolonged and difficult labor. Primary hemorrhage was very profuse and severe, and occurred immediately following the expulsion of the placenta.

In the second case, a primipara, aged twenty-nine, well nourished and in perfect physical condition, the labor was not tedious and, although the child was very large, no anesthetic was used. Hemorrhage was neither severe nor profuse. The cause could not be ascertained.

In case three, a primipara, aged twenty-four, labor was normal, no anesthetic used. Hemorrhage was profuse, and accompanied the expulsion of the secundines. No visible cause.

Case number four differs from the others. Labor was too quick. The membranes were torn in several places, making it difficult to determine whether or not all was passed. The nurse was instructed how to watch, closely, for symptoms of retained parts. About two hours after labor a severe hemorrhage came on, which nearly exsanguinated the patient. The nurse succeeded in controlling it, however, by following the instructions given. After eight hours the woman passed a large blood clot, in which was imbedded a small strip of membrane. I ascribe the cause of this hemorrhage to that little strip, which strip came nearly causing the patient's last journey.

In three of these cases the management was similar and the greatest care used. In the fourth, there was no time for any preparation, as expulsion of the head took place just as the physician arrived, and no nurse was present. While chloroform may have been the predisposing factor in the first case, I can assign no cause for hemorrhage in the two. These very few cases hardly warrant one in drawing conclusions, yet in my practice I have had patients of, apparently, similar constitution, and cases of labor more protracted than those in which the hemorrhage occurred. There must be some constitutional tendency other than hemophilia.

All physicians should be prepared to deal promptly with *post-partum* hemorrhage, especially secondary hemorrhage, and, as a precaution, the physician should always remain for at least one hour after the delivery of the secundines. He should give careful instructions to the nurse regarding the management of hemorrhage, before he leaves. Unless the nurse is competent to deal with such an accident the patient might bleed to death before the doctor could return.

When hemorrhage does occur, the patient should be placed in the Trendelenburg position. At once the physician or other attendant should make pressure forcibly upon the lower part of the abdomen, immediately above the pubic bone, with the outer edge of one hand, in order to compress the lower part of the uterus. This pressure will stop the bleeding almost instantly. With the other hand the uterus is kneaded, to cause contraction. After the immediate hemorrhage has been controlled, the physician must determine whether any of the placenta has been retained, and if so, remove the same. Keep up a gentle massaging, or kneading, of the uterus to insure proper contraction and expulsion of all clots. Of internal remedies each physician has his pets, but ergot or its derivative, such as ergotin, are most universally resorted to in arresting hemorrhage. Other measures, such as the ice bag over the uterine region, injection of hot water into the uterine cavity, even packing the same cavity, and others, may be tried when the others fail, but they should not fail.

The readers of this little article will find nothing new. But, of what has been written some points should be deeply impressed on the physician's, especially the "beginner's," memory.

The points are: Do not assist in removing the placenta too soon, nor too suddenly. To avoid this, remember this rule —make more pressure on the uterus above than you make traction on the cord below. Take plenty of time to find all the secundines; if torn, try to match them together. If a piece be missing, "go for it!" Stay with the patient about one hour after delivery, during which time you give the uterus almost your entire attention, massaging or kneading. The method of making proper pressure is important, in existing hemorrhage. Do not forget to instruct the nurse, in every case, how to manage the accident, nor to leave some form of ergot with her.

Nothing has been mentioned concerning the after-treatment of *post-partum* hemorrhage. In moderately severe cases nature quickly restores the patient, but in very severe ones she is in need of help from outside means. Were it not so difficult to perform, transfusion should be resorted to in all cases of much loss of blood.

The other treatment, which every one can carry out, is to furnish the patient with a liberal, highly-nutritious, liquid diet. Good port wine or grape juice are helpful.

The writer mixes one drachm of the mother tincture China (sulfate of quinine) with about five ounces of water, of which mixture a teaspoonful is given to the patient every hour for about thirty-six hours. The high saline enemas should be given at intervals of a few hours.

1705 Lawrence Street.

[Written for the MEDICAL BRIEF.]

Iodine Oil.

BY EDW. H. SHIELDS, M. D.,

Professor of Dermatology in the Miami Medical College, Cincinnati; Dermatologist to the Jewish Hospital, etc.
Cincinnati, Ohio.

During the past ten years I have tried to improve upon some of the various pharmaceutical preparations used in the treatment of skin and venereal diseases; not because they were not efficacious, but because I thought that many of their objectionable features could be removed, enabling me to obtain better and easier results, both for my patient and myself.

The first preparation experimented with was mercurial ointment. The only drawback to this preparation, as obtained from the druggist, was that it was often rancid, and its use is followed by a folliculitis, or an eczema. Second, it requires a long time to properly apply or to rub in from four to six grams. As a substitute for fat I am using goose fat, which, as you know, is very rapidly absorbed, and an ointment with this material for a base will shorten the time of treatment at least fifteen to thirty minutes. This is something that must not be lost sight of, because all patients find this method of treatment very tiresome. As the melting point of goose fat is very low, it can not be used as a base for mercurial ointment without an addition of wax or paraffine, and as an addition of these substances would greatly interfere with its absorption, I have modified it slightly, without the addition of any new substances. This fat contains about forty per cent of stearin, and by freezing the fat it becomes solid. It is then placed in a filter press and the oil expressed until only ten per cent of oil remains. The residue will be found of a suitable consistency for even a summer ointment, without the addition of wax, etc. I now add to the fat one per cent of carbolic acid, which keeps it sweet. With this fat the ointment is made in the usual manner.

To summarize its advantages, I can state:

1. It is very rapidly absorbed.
2. It requires less time for its application.
3. It is soothing to the skin and is less irritating than other mercurial ointments.
4. It requires less ointment when this base is used.

Having had such success with the mercurial ointment, I now began with iodine. I desired a solution of iodine that would not be irritating, and so experimented with the tincture of iodine, but abandoned it. Having a suitable residue for my ointment base, I made a solution of oily iodine, five to one hundred, and was surprised to find a perfect solution. I then attempted a one, ten, twelve, fifteen, eighteen, twenty-one, twenty-two, twenty-three,

twenty-four and twenty-five per cent solution, and though I have not tried a stronger solution, I think that with great care of technique a stronger solution can be made, but as I did not think that greater strengths possessed more value, I carried my experiments in this direction no further. What I have said seems very easy and simple, but the technique which I employ is quite complicated. First, you must have pure, sweet goose fat, taken from the belly of the goose. This is then placed in a glass jar and rendered, the temperature never being over 190° F. The liquid fat is poured off and again heated to 190° F., and the water allowed to separate and flow to the bottom of the jar. The fat is then drawn off and cooled. Up to this stage the fat has not come in contact with any metal. The oil is now frozen to a low temperature and placed in a filter press, whereby all of the stearin is removed. During the early experimental stage I used a suction filter, but, owing to the great loss—being able to obtain only three hundred out of two thousand grams of fat—I abandoned this method. The object of exercising such great care was to increase the solubility of the iodine, and to prevent the contamination with iron. When the above process is properly carried out, we have, as a result, a true oily solution, which is never more than a definite quantity of iodine dissolved in a definite quantity of oil.

It is a well-known fact that some of the essential oils will dissolve iodine, but in the process the iodine is changed, and we have a new salt or combination formed. The principal desiderata of an iodine solution for both internal and external medication is:

1. It must contain iodine in sufficient quantity to produce the physiological effect.
2. It must not irritate the gastro-intestinal mucous membrane.
3. It must be easily assimilated.
4. It should not be changed in its composition before it is ready for absorption.
5. It must be a parasiticide.
6. It must be easily and rapidly absorbed.
7. It should not stain the tissues.
8. It should require small doses.
9. It must be in a convenient place for administration.
10. It should not be depressing in its effects.
11. It must be in such a form that it can be taken at any time, regardless of whether the stomach be full or empty. These requisites I shall now take up seriatim:

The full physiological effects are noticed in a very short time.

The iodine oil is readily assimilated, being found in the urine half an hour after its ingestion.

It does not irritate the mucous membrane of the stomach, because each molecule of iodine is enveloped in oil.

It contains free iodine, therefore it is a parasiticide.

Inasmuch as it is found in the urine one-half hour after its ingestion, and within an hour when the oil is rubbed into the skin, demonstrates beyond a doubt that this preparation is rapidly and easily absorbed.

It does not stain the tissues, and small doses are required.

It is in a convenient form for our patients to carry with them, no vehicle being required.

It is not depressing. The usual salts of iodine are often depressing.

It can be taken at any and all times, regardless of the stomach being empty or full. The only exception being that the stomach be free from alcohol, otherwise a little of the tincture of iodine will be formed, which, as you know, is not desirable.

After considerable experience with these new preparations, having used about ten thousand capsules, I find that the dosage is from ten to twenty-five minim capsules per day.

5 West Eighth Street.

With this I wish to express my thanks for the receipt of your BRIEF promptly for the past three years, and renew my subscription for 1907. My family, as well as myself, find the BRIEF a very essential and instructive book, not only for the doctor, but for all those that desire to study the care of the human body. As such I highly recommend it to all interested. Wishing you success.—DR. F. W. ST. CLAIRE, Chicago, Ill.

[Written for the MEDICAL BRIEF.]

The Third Stage of Labor.

BY WILLIAM B. DOHERTY, M. D.,
Professor of Obstetrics, University of Louisville.
Louisville, Ky.

The third stage of labor is the placental stage, or that of the afterbirth, which begins after the expulsion of the child and terminates with the delivery of the membranes and placenta. By contraction and retraction of the uterus the area of the placental site is diminished, the villi or spongelets of the placenta are pressed together and the placenta separated from the uterine wall. Whether it is detached by being folded upon itself and forced down in the longitudinal diameter and delivered edgewise, or in the form of an inverted umbrella, is a question that has given rise to some controversy, but the majority of authorities believe in the former mode of expulsion, and that the latter occurs only when traction is made on the cord. In the majority of cases no procedure or manipulation of any kind on the part of the physician is necessary for the delivery of the placenta, as nature usually does her duty in securing and maintaining uterine contractions which expel it and prevent hemorrhage.

After the birth of the child the uterus may be felt in the hypogastric region as a firm ball. In such cases the woman is perfectly safe, and the obstetrician who is in a hurry and hastens the delivery of the placenta by pulling at the cord, or introducing his hand into the vagina or uterus, does a great wrong, which may result in hemorrhage, sepsis, or dislocation of the uterus. In tedious labors, or manipulative, or instrumental cases in which chloroform was administered for some time, there may be inertia and atony of the muscular fibers, so that the uterus is slow to contract efficiently. If, instead of the feel of a hard ball, like a cricket ball, the uterus appears soft, relaxed, and boggy, it should be stimulated to contract, and be delivered by the Dublin method of expulsion, which consists in gentle kneading, grasping and pressing the uterus downwards and backwards during a pain. The placenta may be detached from the uterine wall and lie in the lower segment of the uterus and be retained, owing to temporary paralysis of the uterine muscles, or inability of the lower uterine segment to maintain its normal condition of distention. Then it becomes necessary to introduce the sterile hand, when the edge of the placenta may be felt protruding at the cervix. One-half hour's time should be devoted to the delivery of the afterbirth by the Crede or Dublin method before the hand is introduced. Traction on the cord should be avoided. Hour-glass contractions do not occur in recent years so frequently as formerly, owing to the fact that ergot is scarcely ever administered, if at all, before the womb is emptied. It is exceedingly rare to find this condition if traction on the child or cord is avoided, and the use of ergot dispensed with.

The afterbirth, in cases of hour-glass contractions, is incarcerated above Bandl's ring, and the contracted fibers of this ring must be dilated by the fingers of one hand, while the other hand is placed on the abdomen and used to express the placenta. Adherent placenta does not occur unless there has been a previous endometritis.

A dose of ergot should be administered after the termination of the third stage, particularly in tedious labors, and, also, when chloroform was administered.

1520 W. Market Street.

[Written for the MEDICAL BRIEF.]

Medical Jurisprudence.

BY FRANK S. DUNSHEE, LL. B.,
Professor of Medical Jurisprudence in the Medical Department of Drake University.
Des Moines, Iowa.

Medical jurisprudence is properly defined as that science which applies the principles and practice of the different branches of medicine to the elucidation of doubtful questions in courts of justice.

The ground upon which the physician and the lawyer meet is the court room and the coroner's inquest, and similar occasions wherein the court asks the opinion of enlightened physicians upon questions unfamiliar to the court and jury. Among the questions which are investigated upon such occasions, for example,

are the effect of poisons upon the human system, whether or not cases of poison were voluntary or criminal; questions of whether blood stains are animal or human; questions of insanity; questions of feigned diseases; questions of personal identity; questions of rape, abortion, paternity, sexual disability, and a large number of other subjects upon which physicians are much better informed than lawyers.

Ordinarily, a witness in a court of justice testifies solely to questions of fact, matters which he has seen or heard or acquired otherwise through his senses. He is under no circumstances permitted (unless called as an expert) to give an opinion. His duty is to lay the facts, concerning which he is questioned, before the jury, and permit the jury to draw the necessary and proper inferences from those facts.

The expert witness, on the other hand, is called for the sole purpose of giving his opinion relative to the effect which is to be attributed to the facts already in evidence. For example, the evidence already in court may show that the patient was suffering from severe spasms at the time of his death. The unprofessional witness may be able to describe minutely the various symptoms and occurrences surrounding and leading up to the death, but, without professional assistance, is absolutely unable to explain what he has observed, through ignorance of the medical phase of the subject.

The physician is called as an expert. The symptoms and occurrences under investigation are described to him, and he is asked to state, not a fact, as is the case with the ordinary witness, but his opinion growing out of the facts which have been placed before him. It may be that upon the opinion of the medical man will depend the question of whether or not the prisoner shall be convicted of murder; whether or not an insurance company shall escape liability to pay life insurance on the ground of suicide; whether or not a practitioner of medicine shall pay heavy damages for having administered a poison negligently and unskillfully.

In fact, the science of medical jurisprudence has become a most important factor in aiding the courts of the country i trials of causes. The importance of th testimony of medical experts will becom more apparent when I say that there scarcely a personal injury case resultin in damage, no matter in what way r ceived, but that it is absolutely necessar in order to determine the extent, as we as the effect of the injury, to call medic expert testimony in order to have th facts of the case properly placed befor the jury, so they may determine whethe the injury is temporary or permanent wnether it will affect the future ability o the person injured to earn a living, o whether the effect of the injury will b greater or less as the time goes on.

One of the most important subject which physicians are called upon to ex plain in court, is that of insanity. I cases of the execution of wills, deeds an contracts, when or where the ments soundness of the person executing suc instruments, or the capacity of such pe sons is called in question, the facts wil be laid before you, and you will be aske for an opinion as to whether or not th person in question was of sound mind.

While traces of this science may be dis covered among the earliest records of civ ilized society, yet, as understood and prac tised at the present time, that is, the ex amination of physicians as experts upo the trial of causes, the science dates a late, probably, as about the fifteenth cen tury.

It was never ordained that physician should be examined in trial until afte the Middle Ages, and we are indebted t Emperor Charles V, of Germany, for th first public enactment to this effect. I the celebrated criminal code framed b him at Ratisbon, in 1532, and which i known by the name of the Caroline Code it is ordained that the opinion of medica men shall be formally taken in every cas where death has been occasioned by vio lent means, such as child-murder an poison, wounds, hanging, drowning, th procuration of abortion, and the like The publication of such a code very nat urally awakened the attention of the med ical profession, and summoned numerou writers from its ranks.

Clapp Block.

[Written for the MEDICAL BRIEF.]

Simplest and Safest Method of Amputation of the Vermiform Appendix.

BY EMORY LANPHEAR, M. D., PH. D., LL. D.,

Formerly Professor of Operative Surgery in the Kansas City Medical College and Professor of Surgery in the St. Louis College of Physicians and Surgeons.
St. Louis, Mo.

It seems strange to me that so much is written and said about such a simple thing as the proper method of removing the vermiform appendix. Queerer still is the common practice of tying a string around the base of the appendix and then "inverting it" (rather, burying it)—as well expect obliteration of the urethra by tying a string around the glans penis; mucous membrane will not unite with mucous membrane. The plan I have followed for years is simplicity itself, as follows:

Draw the cecum well into or beyond the abdominal incision and carefully surround with gauze. Catch the meso-appendix close to the cecal attachment of the appendix with hemostatic forceps, and grasp the serosa of cecum with another forceps, about a half inch away from the appendix. With scissors cut the appendix out, taking with it a small part of the cecum (much of it, if necessary, in order to get well into intestinal tissues free from inflammation).

This leaves simply a hole in the side of the gut, to be closed just like any other incised wound of intestine.

With two or three (or more if the resultant hole is large) silk or linen sutures through the musculosa and mucosa, only, the slit is sewed together, carefully; then the serosa is brought over the line of sutures by a row of ten-day chromicized catgut stitches, No. 1 gut being best. If there seems to be any weakness in this line of sutures the meso-appendix is to be brought up and sewed over and around the intestinal wound, as an additional barrier against leakage.

The cecum is then dropped and the abdominal incision closed.

This operation, of course, is not applicable to cases which have gone on to formation of abscesses; but will be found to be the most simple and safe mode of performing interval operations, as well as removing the appendix in catarrhal inflammation, or as prophylactic appendectomy in the course of abdominal section for other troubles.

3870 Delmar Boulevard.

[Written for the MEDICAL BRIEF.]

Syphilis of the Eye.

BY CHARLES J. LIDIKAY, M. D.,

Professor of Ophthalmology in the University of Kansas.
Kansas City, Kan.

Syphilis attacks the eye as readily as any other part of the body, and unless properly and promptly treated and controlled, results in partial or total loss of vision. No part of the eye is exempt from this dread disease. The anterior parts of the eye are, usually, most affected in primary or acute conditions of syphilis. The posterior parts are more frequently affected in secondary and tertiary forms. The most frequent and one of the most disastrous conditions to vision is syphilitic iritis.

More than one-half of all cases of iritis are caused by syphilis, the percentage ranging from sixty to eighty-five of all cases. It is usually unilateral, but in fifty per cent of all cases ultimately becomes bilateral. It occurs more frequently in males than in females, owing to the more active occupations of the former, and occurs most frequently in early life. The affected iris is of a dull hue, as compared with the other pupil. It is sluggish to light, and may become attached to the anterior side of the lens capsule. This causes the lens to dilate irregularly under the use of atropin.

In serous iritis there is the exudation of a serous fluid, which forms a delicate film on the posterior surface of the cornea, and the anterior face of the lens, and there is increased intra-ocular tension. The pupil is contracted; glaucoma may eventually result.

In parenchymatous or gummatous iritis we have attachments formed between the lens and iris that are firm and unyield-

ing. We may have gummata forming on the iris; these may grow to such an extent as to push out through the cornea and destroy the eyeball. We may also have pus in the anterior chamber.

The symptoms of iritis are: Lachrymation, pain, photophobia, circum-corneal vascularization, discolored iris, and contracted pupil.

Acquired syphilis is one of the most frequent causes of retinitis. We have plastic, serous and parenchymatous inflammations of these tissues. The differential diagnosis of the different forms is difficult. By the aid of the ophthalmoscope we detect increased vascularity, ecchymosis, opacities, edema, and appearance in the fundus of the eye of whitish or yellowish spots. These spots appear either diffused or circumscribed. In the former the entire retina is clouded and slightly gray, with spots in region of the macula that are of a deeper gray. In the later stages these spots usually take on more pigment, and the retina becomes darker. The circumscribed form consists of a large white exudate, usually near the macula, or near a large vessel. This later turns to a bluish white scar, which may, by contracting, cause detachment of the retina. We may also have circumscribed gummata of the retina when there are retinal changes.

When we have syphilitic retinitis, the optic nerve usually has a pinkish color at its point of entrance. It is slightly edematous and surrounded by distended vessels, or it may be hidden from view by plastic deposits upon the surface, or by a cloudy vitreous humor. When the optic nerve or vitreous are affected with syphilis it is, as a rule, due to the extension of that disease from the retina or choroid. They are both rarely the seat of a primary syphilitic affection.

We sometimes have an episcleritis, beginning with pericorneal hyperemia of dull, reddish hue, with few if any subjective sensations. In extreme cases the cornea, sclera, iris and lens are involved in a common inflammatory process.

When the cornea is involved in syphilis, it is nearly always due to the inherited variety, and is most frequently found in youth. Parenchymatous or interstitial keratitis, is a chronic inflammation of the deeper layers of the cornea, and is usuall due to hereditary syphilis. It occurs usu ally from the sixth to the twentieth yea In the majority of cases we have othe symptoms of hereditary syphilis, such a a protruding frontal bone, concave nos poorly developed upper jaw, etc. The di ease usually extends from the margin t the center of the cornea, until the entir cornea presents a milky or ground-glas appearance, and vision is greatly inte fered with. We may also have keratiti beginning at the center, by appearance o several whitish opaque spots, whic finally coalesce and cause the entire co nea to become opaque. This is usuall followed by great pain, congestion an photophobia. There is always some i volvement of the iris and may have a iridicyclitis, which may cause total blin ness.

The eyelids may be extensively involve in syphilis. They may be the seat o chancres, gummas, papules, pustules, o ulcers, the cicatrix resulting therefro causing ectropion and other deformitie of the lids. No part of the lid is exemp from attacks of sphilitic ulceration. Th palpebral conjunctiva is frequently th seat of mucous patches.

The bones surrounding the orbit ma be involved by osteitis or periostiti which may finally cause necrosis. W may also have an intra-orbital cellulitis resulting in abscess. The lachrymal pa sage may be involved by syphilitic change in nasal and pharyngeal tissues. Thi may cause necrosis and occlusion of th lachrymal duct.

Treatment.—Mercury and the iodide are to be pushed to the point of toleratio in syphilis of the eye, the same as in othe localities. I give mercury in the for of bichloride, and also use mercurial oin ment as inunctions. I usually begin wit a few good doses of calomel, and get th patient's secretions flowing more quickly and then put them on the bichloride. I cases where the iodides are urgently ind cated, I give the iodide of potash. I iritis the first thing is to get the iri thoroughly under the influence of atropi The strength of the solution depends upo the amount of inflammation and adh sions that have taken place. Sometime

one per cent solution every three or four hours is sufficient to dilate the pupil. In others it may require a ten per cent solution, and occasionally I use the pure sulphate of atropin powder, dropping it on the cornea and allowing it to dissolve. The patient must be closely watched and instructed to keep his finger over the lachrymal caruncle, to prevent the atropin from escaping into the nasal cavities and there being absorbed. If these procedures do not succeed in dilating the pupil I then put them on a solution of one grain eserin to three drachms of water, and have it used for three or four days, to contract the pupil, and can usually succeed in breaking up some adhesions. I then follow with atropin again. I use moist heat to the eye by napkins wrung out of hot water. Cold is comforting to some patients, but I am convinced there is more therapeutic value in hot water. Iridectomy is recommended by some to control iritis and prevent its passing into glaucoma, but it is very rarely indicated. Sub-conjunctival injections of bichloride or mercury solution, or of normal salt solution, acts nicely in some cases. Application of leeches to the temple, where there is severe pain, is very serviceable.

The treatment of retinitis and choroiditis is, rest for the eye, and push the mercury and iodides to the point of toleration. The same treatment is indicated for optic nerve vitreous and sclera, except atropin is indicated in scleral troubles.

In keratitis the same general treatment is indicated. In acute stage, atropin, rest, with colored glasses for the eyes, and hot moist applications. Look after general condition of patient by keeping in open air and improving general condition as much as possible. In the chronic stage the cornea should be stimulated to promote absorption of opacities.

The eyelids, when involved, should be treated as ulcers are elsewhere, with antiseptic powder, etc. When the lachrymal duct is involved it should be probed and free drainage secured, while we push the general treatment. Abscess of the orbit should be freely opened and drained.

Portsmouth Building.

[Written for the MEDICAL BRIEF.]

The Need of Educating Both the Laity and Profession as to the Surgical Curability of Cancer.

BY J. CLARK STEWART, M. D.,

Professor Principles of Surgery Medical Department, University of Minnesota.
Minneapolis, Minn.

The surgery of malignant disease is handicapped by lay skepticism, often, unfortunately, reinforced by the influence of ignorant or obstinate members of the profession. Let us briefly note what should be believed and taught the laity by all well-meaning and well-informed physicians.

1. That the great majority of malignant tumors are permanently curable by a properly-designed and properly-performed surgical operation, if such an operation can be done early, before dissemination has begun.

2. That the great majority of all tumors occurring after the thirtieth year are malignant, and hence that all such tumors should be considered malignant until proved benign, such benignity being only capable of complete proof by early removal and microscopic study.

3. Accepting the first two propositions, the third becomes inevitable, viz., that every physician upon becoming cognizant of any tumor arising in a patient over thirty years of age, must advise prompt removal and examination of such tumor. It is, of course, understood that many cancers originate before the thirtieth year, and that all suspicious tumors orig inating before this time should receive the same treatment as above.

4. Operations against malignancy must be thorough or they are useless. They should, when possible, remove the tumor, the first connecting lymphnodes, and the tissues between, in one piece without section of the intervening lymph spaces or canals.

Exploratory operations and those for the removal of suspected tumors must be so planned that they can be converted into complete radical operations without serious technical fault.

5. It follows that the operator who removes the early suspicious tumor generally determines, by the character of his

operative work, the fate of the patient, as bad primary work can rarely be remedied at a later radical operation; hence, he should not operate unless prepared and competent to do the required radical operation.

It would seem not unreasonable to hope that the bulk of the profession would subscribe to the spirit, if not the letter of the above, but, unfortunately, every day brings evidence of the contrary. Ignorant men advise delay, urging that they do not believe cancer is ever cured by the knife; and dishonest men do partial operations for a fee, telling their patients they "have given them all the chance there was," while many procrastinate and search after strange gods until their late advice for surgery puts the honest surgeon in the lamentable plight of doing nothing, or merely a palliative operation, which can not help hurting the cause of surgery against malignancy. Is it to be wondered at that the laity distrust surgery in malignant disease, when for one operation properly performed at an early date, with a resultant cure, there are so many late and imperfect operations performed with inevitable relapse and death. Dishonest operating for a fee, and ill-judged operating in charity cases, when no permanent good can be reasonably expected, can not fail to harm the cause of the surgery of malignant disease. Carefully explained palliative operations are only justifiable when considerable temporary benefit will accrue to the patient, because they delay the education of the public, who can not easily appreciate the object of a palliative surgical operation, and count all such operations as failures.

The laity has been educated to consult the surgeon promptly for a pain in the right abdomen, and submits to an early operation in appendicitis or gall-stone disease quite readily, but while these diseases untreated surgically have only a comparatively low mortality, every case of malignant disease means a lingering and horrible death, only preventable by the earliest and most skillful surgical treatment.

I omit consideration of the treatment of malignancy by the X-ray, radium, caustics, etc., and also by the injections of various substances. All of these are only applicable to occasional cases, and, while each may boast some cures, their use probably causes fatal delay in vastly more cases. As X-ray treatment is now so much in vogue, and as it offers such opportunities for disastrous delay, it may be well to review its position in surgery. All small superficial epitheliomata of the face, nose, ears and eyelids can be successfully treated by X-ray, and this is probably here the method of choice, both as to cosmetic and curative results.

In epitheliomata of the lip, tongue, and all other malignant tumors, the concensus of opinion of both X-ray operators and surgeons, is that surgical resources should be exhausted before turning to other methods of treatment. Some remarkable cures of inoperable cases have been reported, but the vast numbers of failures in similar cases can only be guessed at.

Nothing but thorough education of the profession and laity, as to the surgical curability of cancer when seen early, and prompt action, based on such education, can greatly increase the present percentages of cure in this dread disease.

704 Pillsbury Building.

[Written for the MEDICAL BRIEF.]

Diseases of the Breast.

BY ALFRED DE ROULET, B. S., M. D.,
Chicago.
Formerly Professor of Surgery and Diseases of Women in the Medical Department of Trinity University.

I. METHODS OF EXAMINATION.

In few diseases are well-trained powers of observation and wide clinical experience of greater value than in the differentiation of the various diseases of the mammary gland, and in no other organ does disease, in its early stages, furnish less data available for positive diagnosis.

Before attempting to discuss pathological conditions, it is well to familiarize ourselves with the varying characteristics of the normal breast. In practice to attain this familiarity, no opportunity to make such examinations should be neglected. Not only does the breast differ greatly in size, shape, consistence, and general appearance in different women,

but in the same woman it presents widely-differing characteristics under varying circumstances and at different periods of life. At no time can the breast be said to have a permanent structure.

In infancy the breast is rudimentary and consists of a group of small, club-shaped, radiating ducts, with somewhat dilated extremities (Fig. 1). These ducts are lined with epithelium, and are surrounded by a connective tissue stroma. Microscopically, the epithelium shows evidence of active proliferation, and the ducts are more or less filled with epithelial debris. Occasionally, swelling and tenderness, with a milk-like discharge from the nipple, the so-called acute mastitis of infants, may be observed, even at this stage of development. As the condition is due to the active proliferation of

FIG. 1. Mammary Gland from Embryo.

the epithelium of the ducts, rather than to an inflammatory process, spontaneous recovery is the rule, although infection and even abscess formation have been observed in such breasts.

Between infancy and puberty both infections and new growths in the breast are exceedingly rare.

At puberty the mammary gland undergoes a marked hypertrophy, the enlargement being attended by considerable pain and tenderness. While there is a great increase in the glandular structures, epithelial-lined acini, arising by a process of budding from the previously existing rudimentary ducts, the virgin breast owes its size principally to deposits of subcutaneous fat, and the development of a delicate, almost transparent, periductal connective tissue. This tissue is peculiar to the breast, and presents a marked contrast to the coarser interstitial connective tissue. (Fig. 2.)

With the advent of pregnancy the character of the breast again changes. There

FIG. 2. Lobule of Mammary Gland showing arrangement of periductal connective tissue.

is a tremendous proliferation of the glandular elements, the acini increase enormously, while the stroma becomes attenuated, and the periductal connective tissue no longer predominates. In Fig. 3 is shown an enlarged model of the acini and ducts of a single lobule. During this development the breast is painful, and on palpation the glandular structures may be felt as thick, cord-like masses. The areola changes from the delicate pink of the virgin to a color ranging from a light brown in a pronounced blonde, to a brownish black in a brunette. With the cessation of lactation this color fades some-

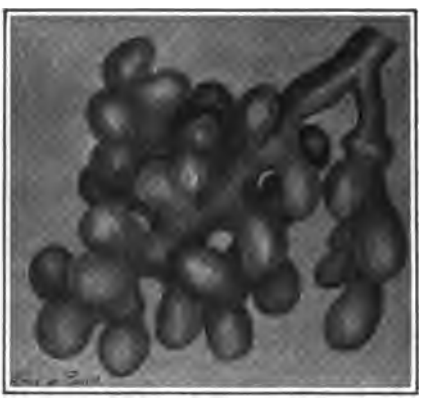

FIG. 3. Model of Lobule in Lactescent Breast. (X 200.)

what, but the original pink is never fully restored.

When lactation ceases, the breast undergoes certain retrograde changes, the

glandular tissues atrophy, many of the epithelial debris, or obliterated by the connective tissue becomes relaxed and flabby. The gland now remains quiescent until the recurrence of pregnancy again calls it into functional activity, or the advent of the menopause is followed by senile atrophy.

In the senile breast the glandular elements undergo a progressive atrophy until a few strings of connective tissue, radiating from the nipple, and a few shreds of the fibrous stroma, imbeded in the adipose tissue, is all that remains of a once active gland. In some particularly well-nourished women, even those well-advanced in years, the breast may show no apparent diminution as a result of these changes, the atrophied tissues being replaced with fat. During this stage of decline the ducts become clogged with

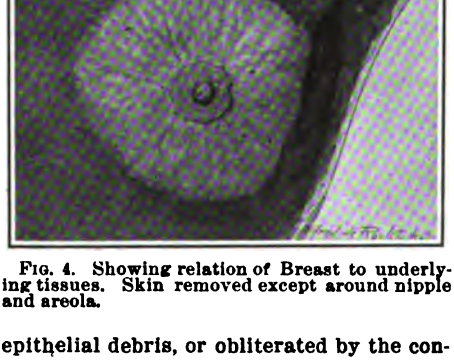

FIG. 4. Showing relation of Breast to underlying tissues. Skin removed except around nipple and areola.

epithelial debris, or obliterated by the contracting interstitial tissues. As a result, small, hard nodules develope, which, on section, are found to be small cysts, containing a slightly discolored fluid. These small cysts are present in practically all breasts at some period of their decline, and should be regarded as incidental to this process, and as devoid of pathological significance.

In the adult virgin the breast should be roughly hemispherical in shape, and firm and elastic to the touch. It should extend from the third rib downward to the sixth or seventh, and from the border of the sternum to the anterior axillary line (Fig. 4). The degree of fullness or projection depends on the amount of adipose and periductal connective tissue present. A firm, projecting breast is characteristic of the virgin, while after lactation the breast is more or less pendulous. While the outline of the gland is commonly described as circular, it is usually somewhat triangular, owing to the presence of three more or less pronounced extensions, one projecting toward the sternum, one toward the upper, and one toward the lower portion of the axillary space. The axillary process, not infrequently, curves in behind the lower border of the pectoral muscles, and occasionally, it is unintentionally left behind in amputations of the breast.

Bearing in mind the anatomical and physiological peculiarities of the breast, a knowledge of the comparative frequency with which certain conditions appear, together with the time of life and previous mammary history most favorable for their development, is often of great value in making a diagnosis. Unfortunately, in many cases the diagnostic indications are very indefinite. The objective signs are vague, and often so masked as to be almost impossible of detection, while other signs of great importance do not appear until late in the disease. The history, as given by the family, is often imperfect, if not actually misleading. For example, the patient fears she has a cancer, but dreads having her fears confirmed, and for this reason gives an entirely mendacious account of the development of her trouble, denying symptoms which she has, and strenuously asserting others which have no existence, save in her imagination. In such cases considerable tact and judgment is necessary to arrive at the facts. In all cases, however, every effort should be made to obtain a complete and correct history of the case, and every point which could, in any way, have the slightest bearing on the condition should be carefully investigated. In this way many sources of error may be avoided.

As to the physical examination of the patient, a proper technique is of considerable importance. The patient should be seated in an ordinary chair, her arms hanging loosely at her sides, and her entire chest and shoulders bare. It is absolutely impossible to make a satisfactory examination with the patient sitting bolt upright on the edge of her chair, her

arms rigid, and three buttons in the front of her dress unfastened. Should it be considered advisable to examine the patient in the recumbent position, she should be placed flat on her back, with

FIG. 5. Correct Method of Palpating Breast.

her head and shoulders slightly raised, and her arms resting easily at her sides. The patient having been properly prepared, both breasts are inspected, any difference in size, color, or contour being noted, as well as any alteration in the character of the skin, as dimpling or induration. The appearance and position of the nipples should be noted. In cancer the nipple of the affected breast is often not only retracted, but is drawn toward the new growth. The examiner should next place the palm of his hand over the breast and gently press or roll it against the chest wall (Fig. 5), when any alteration or irregularity of consistence in the tissues will easily be detected. If no tumor is felt in this manner, it is safe to assume that there is none present. On the contrary, when the tissues are pinched up between the thumb and fingers (Fig. 6) mistakes are easily and frequently made, probably the most common being that of mistaking normal glandular tissue for a new growth. Should a tumor be found, it should be examined with regard to size, character, consistence, character of outline, degree of mobility, the presence or absence of tenderness or pain, and the condition of the axillary and cervical lymphatics. If there is any discharge from the nipple its character should be noted.

By moving the hand lightly to and fro, laterally, over the breast, the presence of adhesions between the tumor and the skin may be determined, while with deeper pressure, the pectorals being held rigid, the presence or absence of adhesions to the pectoral muscles may be detected. With the tips of the forefingers the relative hardness of the tumor, as well as the presence of fluctuation, may be ascertained. In examining the axilla it is necessary to examine also the unaffected side for purposes of comparison, as enlarged lymphatics are not uncommon, and their enlargement on the affected side may have no connection with the condition of the breast. While the whole axilla should be explored, enlarged

FIG. 6. Incorrect Method of Palpating Breast.

glands are most frequently found along the course of the axillary vein (Fig. 7). The hollow above the clavicle and along the posterior border of the sterno-mastoid should be carefully examined. It would

hardly seem necessary to insist upon the necessity for extreme care and gentleness in all examinations of the breast. In inflammatory conditions rough handling causes the patient much unnecessary pain without adding in the slightest degree to the value of the examination, while in malignant troubles unnecessary manipulation and handling are undoubtedly important factors in promoting a rapid spread of the disease, by forcing cancer cells along the lymph channels.

A single nodule in the breast may be cancer, or it may not. Multiple swellings

FIG. 7. Showing General Course of Lymphatics.

found in both breasts are probably due to chronic cystic disease, while multiple swellings, limited to one breast, may be cystic in origin, or may be due to the presence of fibroadenomata.

As a rule, cancer appears most frequently in the upper outer quadrant of the breast, sarcoma in the upper inner quadrant or immediately below the nipple, while a fibroadenoma is found at the periphery, rather than in the central part of the breast, and is superficial, rather than deep seated, and although both breasts are rarely involved simultaneously, several tumors of this variety may develop in the same breast.

As regards consistence, a hard, inelastic tumor is characteristic of carcinoma; a sarcoma is often rather soft, while the various cysts and fibroadenomata are firm and elastic, their feel resembling somewhat that of a slightly-wilted potato. Elasticity or fluctuation in a tumor is sufficient to warrant a diagnosis of cyst, but inability to elicit either does not absolutely bar this diagnosis.

While the borders of a benign tumor are, as a rule, clearly outlined, the outlines of a swelling, due to chronic abscess, tuberculosis, or cancer, are vague and indistinct, it being impossible to distinguish the line where abnormal tissue stops and normal tissue begins. While a sarcoma infiltrates the surrounding tissues, the infiltration is rarely perceptible to ordinary palpation. The presence of pain and tenderness is often a symptom of very uncertain value. As a rule, chronic inflammations are accompanied by a certain degree of tenderness, and may be actually painful; and, as a rule, cancer in its early stages, is unaccompanied by either marked pain or tenderness. Unfortunately, the idea that cancer is always attended with agonizing pain is so firmly rooted in the minds of the laity that it is often difficult to convince them that a cancer may develop without causing any appreciable suffering. Occasionally, patients with mammary cancer notice a slight stinging pain, which comes and goes, lasting but a few moments, and disappearing to return again after an interval varying from a few hours to several days. The stinging is rarely severe, but when present its peculiar quality renders it almost pathognomonic of cancer. Enlargements of the axillary lymphatics may be due to inflammatory conditions or to cancer, but the absence of lymphatic involvement does not preclude the possibility of cancer.

If, by gentle manipulation of the tumor, a clear, serous fluid can be made to flow from the nipple, in all probability the tumor is a simple cyst; if the serous fluid is slightly blood tinged or brownish, a tentative diagnosis of intracystic papilloma may be made; while if the discharge consists wholly or in great part of pure blood, it is very suggestive of cancer.

1013 Venetian Building.

[Written for the MEDICAL BRIEF.]

Collinsonia Canadensis.

BY FINLEY ELLINGWOOD, M. D.,
Editor "Ellingwood's Therapeutist."
Chicago, Ill.

This common herb, known as stone root, possesses many valuable properties. It must be studied with reference to its specific action. Its general influence is that of a mild, gastrointestinal tonic, and in the exercise of this influence it is superseded by a large number of better-known remedies.

The specific symptomatology to which I would direct attention is that of a constriction and heat, with weight—heaviness—in the rectum. A sensation of fullness or the sensation as of a foreign body in the rectum, especially if accompanied with stricture or cutting pains. It is also indicated where there is deficient secretion from imperfect capillary circulation, and especially where there is passive congestion, with blueness or discoloration of the membranes.

So direct is its influence upon the walls of the veins and upon the venous capillaries that I was led, twenty years ago, to prescribe the remedy for varicosis in any locality. I have administered it where there was persistent varicosity in the limbs, and if given in the early stages it is a very serviceable remedy, especially if hamamelis be applied externally. I have treated varicocele with this remedy when the condition in young men was just starting, and have succeeded in checking its development, and causing the disappearance of the enlargement, in a few cases.

I recently prescribed this remedy in a case of extreme acute varicose veins within the vagina, in a woman five months' pregnant, and succeeded in removing the condition very satisfactorily. In this case I used the remedy in conjunction with douches of equal parts of collinsonia and distilled extract of witch-hazel, diluted.

For nearly thirty years I have used this remedy for piles. Although I have got into the habit of combining the remedy with hamemelis, I feel confidence in the influence of this agent, because the results obtained are impossible with hamamelis alone. In cases of piles of recent occurrence, I combine a heavy fluid extract of the two remedies in equal parts. Of this I give twenty to thirty drops in water every two or three hours. At the same time the piles should be bathed externally with distilled extract of witch-hazel, full strength. In chronic cases, I at first use as an external application, a solution of persulphate of iron, and I have then bathed them with the combined heavy fluid extracts of full strength, a small quantity of which should be injected into the rectum after each bowel movement.

The remedy is valuable in subacute proctitis, muco-enteritis, and in some forms of dysentery. It is especially valuable in subacute dysentery, where there is marked atonicity. When it has been necessary from fistula, or from rectal ulcers and piles, to perform an operation upon the rectum, this remedy should be given in reasonable doses, both before and after the operation, and should be continued for two or three days. It will do away with a large portion of the distress in the rectum, and will conduce materially to the healing of the parts.

In conjunction with gelsemium and aconite, as indicated, it will be found a very serviceable remedy in acute cystitis. This is due to its influence upon the capillary circulation within the pelvis.

There are other conditions for which this remedy has been recommended, outside the suggestions pointed out by its specific symptomatology. There are certain general atonic conditions where it acts admirably with hydrastin in chronic stomach troubles, and where there is functional heart disorder, such as palpitation or irregularity; it may be combined with cactus, and will produce satisfactory results. Probably the most severe case of epilepsy I have ever seen, was kept in check, and the spasms warded off for eighteen months by the use of collinsonia in tablespoonful doses every two or three hours. I have not found any other physician who has used this remedy for epilepsy, and I am anxious to receive reports from those who have.

Conditions, however, in which the best results from the agent are obtained, are

pain in the rectum, as mentioned, especially that due to causes not readily determined.

The agent has been used among our physicians for many years for chronic pharyngitis, and while I believe it will be found valuable in many cases of this troublesome disease, I have not obtained from its use the best of results.

In chronic gastritis, with extreme atonicity, it should be given with hydrastis and capsicum, and if continued for a protracted period the results will be highly satisfactory.

100 State Street.

[Written for the MEDICAL BRIEF.]

Some Thoughts Upon the Therapy of Pneumonia.

BY WILLIAM HENRY CHRISTIE, M. D.,
Professor of Materia Medica and Therapeutics in the University of Nebraska.
Omaha, Neb.

The treatment of pneumonia must depend altogether upon the history of the case, upon the patient himself, his habits of life, environment, age, etc., and there is no such thing as a specific for this disease. In certain forms of pneumonia, such as the croupous variety, where the cough is harsh and the fever high, these symptoms can be ameliorated by various forms of medication, but for pneumonia proper we have no specific. And this is not surprising when we consider the variety of forms assumed by this disease. Almost every case differs from the previous one in some respects, and features are important and must be studied and treated rationally. As the history of almost each individual case varies so much, the treatment must vary to meet the requirements. Our therapy must meet the conditions as they arise. For instance, if our patient shows a tendency toward feeble circulation, traceable to the cardiac area, that condition calls for strychnine, and it had better be commenced early than late, the dose depending largely upon the patient's history, whether he has consumed much alcohol, or otherwise.

In patients who have contracted specific disease in early life, and neglected its treatment, this fact will affect the character of the pneumonia. The disease will be of the type peculiar to this history, and these cases must be by the use of iodides, and very often by mercury.

In cases beginning with la grippe, the pneumonia is likely to be of the catarrhal type, and again, the treatment under these circumstances will be different than in croupous forms of the disease. In the latter cases expectoration should be kept up, and in prescribing this fact must be remembered. A good, copious expectoration must be kept up, and, if it ceases, you are liable to have on your hands a case complicated by bronchitis, which complication becomes even more serious than the pneumonia proper. I know of nothing better to meet these complications than chloride of ammonia, very cautiously administered. The tendency will be to relieve the peculiar barking cough, which is usually very distressing, but by preventing this cough we interfere with nature in her effort to clear the bronchial tubes.

In cases where there is much pain in the chest, taking on the form of pleuropneumonia, with pleurisy as a complication, the treatment can be very nicely met by the local application of gaultheria. The oil of gaultheria applied to the chest on a linen layer, which is, in turn, covered with oiled-silk or rubber protective; then a flannel, warmed, is applied over all. The heat of the body will cause the oil to be absorbed. If a four-ply layer of linen be used it will entirely absorb the oil, and no benefit will be derived, but by using a single layer of linen, as above described, the oil is easily and quickly introduced through the skin. The method of doing this is a matter of importance, therefore. At the same time, the salicylates can be administered internally, or if the pneumonia be complicated with pleurisy, the gaultheria may be taken internally in doses of from ten to fifteen or twenty drops in a capsule. Where much pain is present, this treatment will be found to be particularly gratifying.

Where there is a hyperemic of the lungs, due to congestion and dryness of the skin in mild cases of pneumonia, the old-fashioned preparation of ammonia acetat and spirits of niter, the former one-third grain dosage and one-quarter drachm

of the niter for an adult, keeping the patient warm, will produce a diaphoresis, and draw the blood to the surface and relieve the engorgement of the air passages, relieving the cough in a satisfactory manner.

The treatment of pneumonia seems to move in cycles, perhaps because we also move in cycles, and are likely to fall into the trend of them. Our fathers knew a great deal about some of these things, by their observations and through their clinical experience. One measure which they used in the treatment of pneumonia, that of producing counter-irritation to relieve the congestion and consequent exudation, had its reward. It does now. Care must be taken, however, not to use stimulation or counter-irritation until the patient has arrived at the third stage. In this, as in the last measure recommended, the time and manner of doing is of more, or as much, importance as the therapeutic measure itself.

Another treatment employed by our fathers in medicine was the use of the lancet. Once in a while acute cases of pneumonia to-day, where there is marked engorgement and embarrassed respiration, can be benefited by the abstraction of blood. Aconite is also useful in this connection, when there is great congestion of the blood vessels of the lungs. By withdrawing the blood from the lungs and carrying it to the stomach, a marked depletion is produced by the aconite. This, too, requires a knowledge of the physiological effect of this drug, when to use, how far to push it, to get the desired result, etc.

In sthenic cases in malarial districts, along the course of our rivers, quinine has been used in pneumonia, in large doses. I have used it in ten, fifteen, and twenty-grain doses, until it produced the marked physiological effect. I have seen this treatment relieve congestion and pain very quickly. In one case, where this treatment had been carried out to the letter, the pain and distress continued, but the quinine brought about phenomenal results in changing the character of the fever.

As stated in the beginning of this article, there is so much in therapy of pneumonia dependent upon the phases of the disease, that the only rational course is to get the history of the case, and treat it on that basis.

48 Barker Block.

[Written for the MEDICAL BRIEF.]

Relief of Insane Conditions by Surgical Procedure.

BY ARTHUR McGUGAN, B. SC., M. D.,
Professor of Neurology and Psychiatry in the University of Colorado.
Denver, Colo.

It has been established that many abnormal conditions of the mind and nervous system can be relieved by the correction of anatomic defects, and the relief of reflex irritation by surgical means. During the early period of my profession this surgical interference with the pelvic viscera was carried to a ridiculous extreme, bringing well-marked censure on this form of treatment applied to insanity, and it is only recently that the status of operative procedure has been even approximately established. In meetings of medical societies devoted to discussions of a general character, very little is heard, even yet, of the work being done along this line, and only in those organizations concerned particularly with insanity will be found reports and records of progress. Even here, there is a lack of unanimity of opinion, the more conservative doubting the real value of these procedures, while some of the younger and more radical members of the profession are inclined to make claims not quite justified by results.

I have performed and reported upward of fifty operations for the relief of insanity and epilepsy, and am presenting the appended report as one characterized by some features of particularly instructive value.

I was called to a neighboring town July 10, 1904, to see Mrs. W. C. J., reported to be violently insane. I found her manacled, hand and foot, to a bed in the little hospital, under the care of two nurses and the attending physician. The preliminary examination and history revealed the following:

Patient twenty-three years old, married nine months; miscarriage two months before. Previous health good.

Family History.—No insanity, tuberculosis, epilepsy, inebriety, or any other condition predisposing to defective organization.

Patient's mother was present and closely observed.

Patient's History.—Delivery at full term, naturally. Ordinary diseases of childhood; progress at school rather better than the ordinary. Graduated from an Eastern college one year ago. Is active, athletic, cheerful disposition, and happy in domestic relations.

Status Presens.—At the initial visit complete examination was impossible, but at this time, and on subsequent visits the additional facts were obtained.

Digestion.—Lips, teeth and tongue covered with sordes, due to lack of food and water ingestion. Tongue bright red at the edges and heavily coated. Teeth and jaws normal. No history of indigestion; occasional transient constipation. Body weight reduced from ten to fifteen pounds. Circulatory and respiratory system normal.

Genito-urinary System.—External parts normal. Uterus completely retroverted; fundus considerably enlarged; slight semi-purulent discharge; both ovaries prolapsed. Some external tenderness over the fundus and the right ovary.

Nervous System.—Deep reflexes increased; pupils slightly widened and active. Superficial and organic reflexes normal. No paralysis, anesthesia or paresthesia.

Persistent headache, principally at the vertex. Persistent insomnia for the past two weeks.

The mental picture was in the formative stage, varying from day to day; its analysis, therefore, can not be made exact, but in general the following errors predominated:

Intellectual Processes.—Sensation travels rapidly, usually painful; perceptions acute, but erroneous, especially auditory, resulting in occasional hallucinations of this sensation. Memory blurred by the increased flight of ideas. Ideation very rapid and incoherent, at times. At other times very slight, even to dullness. Reasoning and judgment much impaired and marked by painful delusion of a persecutory type and rapidly-changing errors in identity. For instance: On one day the nurse was thought to be the mother, on another day a friend, and at some other time a stranger whom she had never seen before.

Mental Processes.—General tone of feeling, both physical and mental, was usually much depressed. Disorientation, both as to person and place, was so complete that beyond the condition of depression and the attitude resulting from it, that no correct observation of the patient's attitude towards herself and environment could be made.

This blurring of mental processes is always more or less complete, depending upon the patient's capacity for the expression of different states of feeling.

Motor Processes.—All involuntary processes are increased, due to the lack of inhibitory control. Of the voluntary processes it is noted that ordinary acts, in general, were of the impulsive variety, not controlled and not modified by the ordinary normal restraining impulse. Thus, general motor restlessness led her to destructiveness and acts of violence against her attendants. These and all her acts were, in some degree, purposeless. For instance, she did not know why she wished to destroy this particular article, or injure that particular person, nor why, on occasion, she felt like harming herself.

The case was diagnosed as one of the active exhaustive psychoses, according to the classification of Kræpelin.

Prognosis favorable. It was advised that the patient be removed to an institution for the insane, and that as soon as her motor restlessness could be controlled that the condition of the uterus and the ovaries be treated surgically. This advice was accepted by the relatives, and the patient was removed to a private hospital in Denver. She was placed in charge of a nurse experienced in the care of the insane, and treatment was directed, first, to the relief of the insomnia and restlessness. It consisted in the alternating tepid pack and warm bath, the pack applied one-half hour daily, the bath for two hours. The headache was relieved by the persistent use of the ice cap. By the end of the first week she was sleeping naturally, and the restlessness had disappeared. Improvement in all respects

was noted, excepting her delusions, which were becoming more fixed, showing a tendency to systematic arrangement. On August 10, 1904, she was removed to a general hospital for the purpose of curettage and ventro-suspension. Convalescence from the operation was established, after the ordinary interval; that is, about two weeks. Complete restoration of the mental faculties occurred a few days before, or, in the second week following operation. In a few days more she returned to her home, and, with the exception of a slight depressed spell in the second year following operation, and due to extreme worry over financial matters, she has been in perfect health. She presented herself yesterday, weighing twenty pounds heavier than at the time of operation, expressing herself as feeling perfectly well in all her mental faculties, and having been so quite constantly since the time she was under my observation.

This case differs from all others that I have reported previously, in the fact that the patient is, apparently, of normal mental and physical development. By this I mean that physically she presented no stigmata of degeneration of cranial, facial, body, mental, or moral type. That her previous history shows no record of the peculiar perks and foibles always marking the previous life of the ordinary case of insanity, and that her family history presents no condition carrying predisposition to mental deterioration in the descendants.

My experience with the insane, based upon accurate report and tabulation of cases, leads me to believe that a high percentage (about ninety-five) is marked by some or all of the defects above referred to. In my previous observation of insane persons operated on for relief of insanity the cases were all of this defective type. The operations done for their relief were done upon the assumption, first, that all anatomic defects in the insane should be corrected, and all reflex irritation be removed, as these conditions are all considered barriers to progress towards mental restoration. In the second place, that it is known and admitted that surgical intervention of any kind, even without structural necessity, frequently results in mental cure. In such cases it is not always held that the anatomic defect is the cause of the psychoses. But both the defect and the psychoses arise from the same cause, that is, defective organism. It is held, though, that if the anatomic defect can be corrected, the patient's vegetative and general functions will be improved, to a greater or less extent, thus facilitating recovery. In this case the basis for surgical intervention is one entirely apart from these considerations. The anatomical development, in all respects, was perfect, and the condition corrected was considered one of recent pathological acquisition. It was confidently expected that the relief of this condition would be followed by prompt mental improvement, in which, as the report shows, we were not disappointed.

I regard this case as one very similar, in its etiology, to the cases familiarly known as puerperal insanity, and which are now classified among the exhaustive psychoses. The influences bearing upon the nervous system and producing mental unbalancement, were psychic in character, due to the fear and distress of mind incident to an abruptly-terminated pregnancy, and the material influence consisted in the abnormal position of the uterus and adnexa, as well as the possible infection from retained products.

Majestic Building.

[Written for the MEDICAL BRIEF.]

General Considerations of Stomach.

BY CHARLES NOOTNAGEL, M. D.,

Professor of Clinical Medicine and Physical Diagnosis in the University of Minnesota. Minneapolis, Minn.

I have chosen the stomach as my theme, not because of its interest to all, but because of the position which its diseases do already or will soon occupy in the field of medicine. We are beings who love extremes, and it was with the "humors of the blood" a century ago (they were regarded as the cause of nearly every disease under the sun), so will it probably be with the abnormal functional and anatomical conditions of the stomach; this will obtain, at least, for the gastric enthusiast—specialist, I meant to say. During the last two decades of this

century, however, our knowledge of the diseases of the alimentary tract in general, and of the stomach in particular, has become so much broadened and enriched by facts gleaned by investigators and observers all over the world that we can not be blind to the fact indicated thereby, *i. e.*, the importance accorded to diseases of the stomach by the masters of our profession. And this is as it should be, judging from a physiological point of view. Everything ingested, either for nourishment or for the purpose of tickling our perverted palates, must, of necessity, enter the stomach and there be prepared for absorption or further elaboration in the intestines, or be discarded as useless or worse than useless, for many of the condiments and stimulants stand in direct causal relation to certain gastric diseases.

Again, the basis for gastric diseases is often laid at or soon after the birth of many children. To illustrate this point, allow me to call your attention to the many injurious decoctions poured into the newborn's delicate stomach by well-meaning but misguided persons assisting about the lying-in chamber, and this practice of giving unsuitable food and drinks is continued in innumerable instances during childhood, and later. This pernicious practice not only lays the foundation for the development of various gastric diseases alone, but paves the way for a hundred and one other diseases to gain foothold in our bodies by lowering the general vitality. This opens a field for our serious consideration almost too vast for our comprehension, with our present knowledge of the relations which one disease bears to the origin of another. To enter more fully into this part of the subject would carry us far beyond the limited scope of this paper, but I wish merely to intimate possibilities.

Judging from the very general irrational manner of feeding the young in our land of plenty, the foreigner is justified in calling us the "dyspeptic nation," and in order to treat, and also to prevent as much as possible, gastric diseases, we ought, by rights, to commence at the very beginning, *i. e.*, immediately after birth of the child, and then continue the good work by teaching it the principles of correct eating, so that it may, after attaining manhood or womanhood, as the case may be, preserve its normal digestive energy, and thus avoid endless and useless suffering. The old adage, "an ounce of prevention is worth a pound of cure," is as applicable in this instance as in any other.

But what concerns us more directly, as medical men, is the diagnosis and cure of gastric diseases.

Since the advent and intelligent use of the stomach tube, diagnosis of gastric diseases has stood in the front rank of progress in medical science. In fact, we have since then learned so much in regard to gastric diseases that the number of cures effected have materially increased during the last few years. The progressive physician is no longer at the mercy of empiricism, inasmuch as he may, by the aid of the stomach tube and chemical analysis, arrive at definite conclusions and direct his treatment with precision.

The following cases may serve to illustrate this point:

Mrs. N., thirty-eight years old, farmer's wife, complained of dyspeptic symptoms for the past twelve years; was treated for various gastric and other diseases, but without success. She was referred to me by a colleague, under whose care she had been for some time. *Status presens:* Looks very sallow, very much emaciated, lost forty pounds during the past two years; complains of anorexia, dizziness, headache, bloating after eating, especially after the ingestion of fats and carbohydrates; constipation; vomiting, especially in the morning, the vomitus containing a great deal of mucus; also feels nauseated after eating; urine scanty, but free from sugar, albumen and casts; menstruation regular, but scanty; sleeps poorly, tongue heavily coated, and the papillæ at its base very prominent.

Physical examination (about one hour after dinner): Gastric region and entire abdomen distended and tympanitic. By careful percussion the stomach, apparently reaches one and one-half to two inches below the umbilicus. This was verified, both by the inflation with gas and also by pouring in water through the stomach tube, and marking the lower and upper limit of dullness, then syphoning

out the water and noting the change in these limits.

Chemical examination of stomach contents an hour after the ingestion of the usual test breakfast; obtained stomach contents with ease by means of the stomach tube. The stomach contents contained much of the ingested bread and only four-hundredths of one per cent of free and combined hydrochloric acid. The test with congo paper, and also that with tropaolin, gave negative results. Uffelmann's test for lactic acid showed only a trace. There was much mucus present.

Diagnosis.—Chronic gastritis, accompanied by gastrectasia and decreased secretion of hydrochloric acid. Judging from the large amount of mucus present, no atrophic condition of the gastric mucous membrane existed.

Treatment.—First and foremost, the diet was carefully regulated and everything was well masticated and slowly eaten. At first the diet consisted entirely of animal food, such as scraped beef, oysters and white meats; also chopped raw smoked ham was eaten with a great deal of relish, and with no apparent bad effects. After a few days, well-toasted bread was allowed, and from then on the quantity and variety of food was increased.

Next in importance was the nightly lavage of the stomach, at least four hours after eating the last meal. At first I used sodium bicarbonate in the water for lavage; afterwards, sodium salicylate. The diet was as dry as possible, and to quench the thirst a wet sheet was wrapped about the abdomen during the night, and if thirst became annoying I gave an enema of cold water, repeated as often as required. This always quenched the thirst admirably. Schroeth was the first to institute this dry diet for the cure of gastrectasia, and the treatment is, therefore, known as Schroeth's dry diet cure.

Marked improvement was noticeable from the first day of this treatment; all disagreeable symptoms disappeared within six weeks, and patient left for home at the end of this time. On inflation with gas the stomach now extended only down to the umbilicus; this was verified by the introduction of water, noting resulting area of dullness, and syphoning out the water, and then noting change in the dull area. No medicinal treatment was used in this case.

After patient had been home for some time she became lax in observing the strict dietary rules, and soon some of her former symptoms reappeared; this frightened her so that she has been careful to follow my instructions to the letter ever since. Just prior to her departure, the contents of the stomach were examined quantitatively for free and combined hydrochloric acid, which had gradually increased in amount ever since her stomach was washed out regularly, and was found to be 0.14 per cent, which, as you know, is slightly below the normal.

This case is very instructive for several reasons. First, the gastrectasia was entirely due to chronic gastritis. Second, the abundance of mucus excluded an atrophic condition of the gastric mucous membrane. Third, the marked improvement following a more suitable diet and gastric lavage without the use of any medicinal treatment whatever. Fourth, the marked shrinkage of the dilated stomach occurring after the employment of dry and suitable diet for some time.

I have several times seen dry diet mentioned for the treatment of gastrectasia, but never in the manner in which I employ it. With the older method of dry diet, *i. e.*, withholding water or fluid of any kind almost altogether, or allowing it only in the form of a wet pack during the night, I think the fluid introduced is sufficient for the body's requirements, and, in consequence, patients do not improve as rapidly and do as well under this treatment as where water is abundantly supplied by rectal injections.

I could cite some other cases where equally good results were obtained by dry diet and rectal injections of water in cases of gastrectasia due to chronic gastritis, but I wish to reserve my space for other considerations in this connection.

By the way, Liebermeister mentions, casually, that nutrient enemata have, besides supplying food, the additional advantage of supplying much-needed water to the patient while undergoing the dry diet cure.

Strict rules must be laid down by the physician, and be implicitly followed by

the patient, otherwise no good results can be obtained.

The following is a case in point: Mrs. M., twenty-nine years old, has complained of dyspeptic symptoms ever since puberty. On physical examination I found lower boundary of stomach extended two and one-half inches below umbilicus. Chemical examination of stomach contents an hour after test breakfast showed twenty-five one-hundredths of one per cent of combined and free hydrochloric acid; also much mucus and nearly the entire test breakfast was removed by the stomach tube.

Diagnosis.—Chronic gastritis, accompanied by gastrectasia and deficient motor power of the stomach.

Treatment.—Carefully selected dry diet, with gastric lavage four hours after patient's last meal in the evening. Sodium bicarbonate was used in the water for lavage, also rectal injections of water were ordered to be taken whenever thirst began to be annoying. During two weeks of rigid observance of these regulations most of the disagreeable symptoms ameliorated, and the patient became tired of the restrictions placed upon her, and indulged in a "good square meal," ending up with ice cream, cake, etc. The result was as might be expected, a complete return of her former symptoms with a vengeance, and now the patient is willing to obey orders.

One remarkable feature of this case is the fact that after washing out the stomach, four hours after the patient's last meal, the water will, finally, return perfectly clear; but if the patient retches, fluid, loaded with food remnants, reappears. This may either be due to a sacculated condition of the stomach, which in this case I can not determine by physical examination, or to an insufficiency of the pylorus. In addition to the above treatment, I now apply faradization to patient's stomach four hours after last light meal, by placing an electrode over gastric region and introducing the other into the stomach through a stomach tube, previously having introduced into the stomach a considerable quantity of water. The internal electrode I have constructed out of two twisted, thin copper wires, armed with a small pledget of cotton at the lower end. The wires are first introduced into the stomach tube and forced out through lower fenestrum, then attached to pledget of cotton, which, in turn, is packed tightly into lower closed end of stomach tube, and the electrode is ready for use. The electrical connection is established by the cotton submerged in the water previously introduced. After ten minutes' faradization, with frequent interruptions, I proceed to wash out the stomach through my improvised internal electrode, and, apparently, the stomach was on each occasion almost empty, since but very little food was brought up by the wash water, and the water syphoned out was but slightly, if any, in excess of the amount introduced for the lavage. The final issue of this case must be reserved for some future occasion, since not time enough has yet elapsed since the commencement of the treatment of this case to warrant me in judging of the final result.

The most prolific cause of gastrectasia is pyloric stenosis, and the second in casual importance is the habit of gormandizing; the latter produces chronic gastritis and this, in turn, gastrectasia. The many other causes need not be mentioned here.

By suitable and dry diet, we have seen by the above what brilliant results can be obtained. Of course, the treatment must be instituted before an atrophic condition of the gastric mucous membrane has developed. Now, the question arises as to which of the existing conditions, the chronic gastritis or the gastrectasia, is the more instrumental in producing the phenomena of disease. In my humble opinion, the former is almost wholly responsible, because we see in cases of megalogastria no evil results following from the great capacity of the stomach, so long as its secretory and motor functions proceed normally; again, in the case of savages, who, during periods of plenty, habitually overload their stomachs, and, in consequence, acquire permanent gastrectasia, we find none of the symptoms developed commonly attributed to gastrectasia. Of course, I do not wish to be understood as maintaining that gastrectasia does not add certain symptoms to an already existing chronic gastritis, but I do

wish to be understood as maintaining that chronic gastritis is the prime and most important condition demanding our serious attention and treatment. As long as we can maintain normal gastric secretory and motor functions, no evil results from simple gastrectasia, but just as soon as either of these become insufficient abnormal sensations and symptoms of gastric disease will supervene.

As to the causative action of micro-organisms in the production of gastric diseases, my limited observation leads me to believe that they are the result of gastric disease rather than the cause.

After this digression, let us return to the means at our command for arriving at a definite diagnosis and directing our treatment with precision. First of all, we must, by physical examination, determine the size and location of the stomach. This can, sometimes, be accomplished by simple percussion, but this alone is not reliable, and must be verified by one of the various other methods at our command; for instance, by allowing the patient to drink a glass of ice water and, after the lapse of a few minutes, feel for the lower boundary of the cold area produced upon the abdomen, or by distending the stomach with carbonic acid gas, produced by the introduction, first, of a solution of tartaric acid, and followed by one of bicarbonate of soda; or, better still, by filling the stomach with water through a stomach tube, and then determining the lower boundary of dullness by percussion, then syphoning out the water and noting the change on percussion. By these procedures the size, conformation and position of the stomach can be accurately ascertained.

By administering iodide of potassium in gelatin capsules and, subsequently, testing for its appearance in the saliva, we can determine the absorptive power of the stomach.

We possess two methods for determining the motor power of the stomach. We may either administer salol and, subsequently, test the urine for salicylic acid, and the time consumed before the latter becomes demonstrable will give us a fair index of the motor power of the stomach; or we may withdraw the stomach contents through a stomach tube, at a certain time after the ingestion of a test meal. The latter method is probably the more accurate and convenient, because it gives us an insight into the quantity of food still remaining in the stomach, and at the same time also furnishes us a sample of the stomach contents for chemical examination. This sample we test for free hydrochloric acid; then the amount of free and combined hydrochloric acid must be determined. The most accurate and convenient means at our command for doing this is the incineration method, so prominently brought before the profession by Professor Leube. Although this requires an elaborate chemical outfit and some knowledge of quantitative analysis, still the results obtained will amply repay one for the additional expense and labor involved. I employ this method exclusively, and can vouch for its accuracy, not alone from my personal experience, but from having seen comparative quantitative analyses of stomach contents made while working in the laboratories at Wurzburg, under Professor Leube's supervision, and at Berlin, under the direction of Professor Gerhardt.

Then we must test for the products of proteid digestion, also for lactic, butyric, and acetic acid.

We should also subject the stomach contents to a careful microscopical examination.

All these procedures aid us in arriving at definite conclusions in regard to the conditions existing in the stomach, and at the same time guide us in selecting methods of treatment with more precision. For instance, the continued absence of hydrochloric acid indicates gastric carcinoma, if supported by other symptoms indicating this malady. Constant hyperacidity, in connection with certain other symptoms, indicates gastric ulcer. The presence of lactic, butyric and acetic acid, and numerous micro-organisms, points to fermentative changes going on in the stomach, and in such cases the diet demands careful regulation and gastric lavage should be employed. Large quantities of mucus in the stomach point to a catarrhal condition, etc., etc.

In conclusion, I wish to state that it was not my intention, in this brief paper, to treat exhaustively any one abnormal

gastric condition, but, rather, to call attention to some of the more modern methods of diagnosis upon which to base definite conclusions and rational treatment.

Andrus Building.

[Written for the MEDICAL BRIEF.]

Post-Operative Cystitis; Its Prophylaxis and Treatment.

BY JACOB BLOCK, M. D.,

Professor of Genito-Urinary Surgery in the Medical Department of the University of Kansas. Kansas City, Mo.

The term indicated in the title is employed as a convenient means to diagnosticate catheter infections, where this instrument is employed to relieve retension following operations. It is not limited to genito-urinary operations, but includes almost any operation in the field of genito-urinary surgery, and is of consequence to the obstetrician as well as the general practitioner.

From a large personal experience I feel that its importance can not be exaggerated, nor its seriousness underestimated. I take occasion to emphasize the subject for the reason that, though I have frequently spoken of the many annoyances following operation in consequence of the employment of the catheter, it still strongly appeals to me.

Infections of this nature unnecessarily prolong convalescence, occasion a great deal of distress and pain, increase the attentions to be bestowed upon the patient, as well as add to the anxiety of the attendant. Not infrequently the infection extends beyond the posterior urethra and bladder to the pelvis, even endangering the life of an otherwise convalescent patient.

Despite the modern aseptic and antiseptic methods employed by every careful practitioner, we are confronted by a condition in which these prophylactic methods seem ineffective as a preventive means. When one considers that the muscularis is in a paretic state, the mucosa turgid from over-distention, and the patient often in a condition of diminished resistance, we can readily apprehend an exaggerated receptivity to the various bacterial flora.

It does not necessarily follow that the infection is always from without; it may be from within; the contaminating germ may and does reside in the contiguous bowel; the colon bacillus may even find entrance where the catheter is not employed. Of these infections it is not my purpose to speak. They form such an indefinite minority of the cases under discussion that their possibility is only mentioned.

In the vast majority of instances the nurse or attending surgeon has failed in the details of rigid asepsis.

That these infections are much more common than is generally believed is due to the fact that many of them occasion but little annoyance, and eventually recover without interference. Some, even, may pass entirely unnoticed. I am quite sure that if any case requiring catheterization a number of times were closely examined for the evidences of a posterior urethritis, or cystitis, the presence of pus in the urine could be much oftener demonstrated than is now believed. All operations about the pelvic organs and especially the rectum and anus, are very apt to cause retention; scarcely one patient out of a dozen escapes. It is well known that while some may require but one or two introductions of the catheter, there are others in whom retention may continue for a week.

It has been my unfortunate experience to observe the results of a mal-adroit procedure to produce a much more serious trouble than that for which the operation was undertaken. That these things may impair the confidence reposed by the patient in the practitioner, to say nothing of his personal chagrin, goes without saying.

I well remember the instance of an old lady, suffering from an impacted gallstone in the common duct. She had been jaundiced for more than a year, and very much reduced by constant pain, chills, fevers and sweats. Despite her grave condition, I had succeeded in removing the stone from the duct, and while on the way to complete and successful convalescence, more than a month distant from the time of operation, I was greeted with one of these surprises while the patient was up and about. The nurse who had catheterized her for a number of days fol-

lowing the procedure, deftly concealed from me the bladder irritability of which the patient complained. Suddenly she had a severe chill, a high fever and a pronounced renal crisis referred to the left side—a pyelitis from an ascending infection, due to catheterization. Fortunately, she escaped without instrumental interference.

It is assumed that everyone is perfectly familiar with the technique of catheterization, but, unfortunately, the fact that "a broken link weakens the entire chain" is not fully appreciated. Boiling or firing the instruments is supposed to be the *sine qua non*. Washing the hands and, after the ablution, cleansing the finger nails is, usually, deemed of sufficient importance. Cleansing the genitals, and even the anterior urethra, is usually not forgotten, but how often does the attendant fail to return to the basin for a second washing of his hands and fingers? Though the lubricant is thoroughly sterilized, the nurse not infrequently permits the catheter to dangle about the clothing or bedding, and thus robs the supposed asepsis of its efficiency.

With all of these details observed, the number of infections would certainly be minimized, but there yet remains a small minority, where, despite all these precautions, infection is certain to follow, owing to the causes already mentioned.

It would not be amiss to follow the plan adopted in the Viennese General Hospital as a prophylaxis against ophthalmia neonatorum, to drop a two per cent solution of silver nitrate into the urethra, as was done into the conjunctival sac. The treatment is extremely simple. When once the condition is recognized, an instillation of two or three per cent of silver nitrate solution, after emptying the bladder, will act like a charm, sometimes requiring but ten or fifteen minims to accomplish the result, and when noticed sufficiently early, two or three such instillations practised daily will most certainly achieve the result. Other silver salt substances may be employed, but a personal experience assures me that the nitrate is the most efficient and certain of all, nor is it painful if properly practised. Internal remedies can be dispensed with.

Argyle Building.

[Written for the MEDICAL BRIEF.]

Neurasthenia—Its Etiology and Treatment.

BY L. HERBERT LANIER, M. D.,
St. Louis, Mo.

Impressed, as I have been, by the frequency with which general practitioners everywhere have to treat neurasthenia, it causes no little speculation on my part to explain why this subject is so infrequently discussed by medical men in their society meetings.

There is no other disease recorded in the dictionary of pathologic phenomena which presents such a variety of symptoms, and whose symptoms are so misleading and cause so many errors in diagnosis, as neurasthenia, considered from a general practitioner's viewpoint.

Neurasthenia is a condition of nervous prostration or nervous exhaustion, attended by many variable and inconstant subjective symptoms, and a few significant objective phenomena. It is brought about by a neuropathic tendency, combined with overwork or exertion of any kind, excesses, traumatism with fright, and chronic diseases; or perhaps a better definition would be, a debility of the nervous system, causing an inability or lessened desire to perform or attend to the various duties or occupations of the individual. Professor Bartholow describes it as consisting "essentially in an exaggerated susceptibility to bodily impressions and false reasoning thereon."

Causes.—The causes may be grouped as hereditary and acquired. We shall first consider the cases coming to us which point to hereditary origin. We do not all start in life with the same amount of nerve capital. Parents who have led irrational lives, indulging in excesses of various kinds, or who have been the subjects of nervous complaints, or of mental trouble, may transmit to their children an organization which is defective, because of the absence of "nerve force."

Such individuals start handicapped with a neuropathic predisposition, and furnish a considerable proportion of our neurasthenic patients. Or, as Van Geison puts it: "The potential energies of the higher constellations of their association

centers have been squandered by their ancestors." We must also consider those cases in which, during intra-uterine life, there have been conditions which interfered with the proper development and nutrition of the embryo. Then there are forms of hereditary neuropathy, caused by injury to the germ-plasm, derived from one or both of the parents, and as Osler euphoniously puts it: "So long as these individuals are content to transact a moderate business with their life capital, all may go well, but there is no reserve, and in the exigencies of modern life these small capitalists go under and come to us as bankrupts."

There is one other condition which plays more than a minor role in the etiology of hereditary neurasthenia; that is the indifference manifested by the majority of women concerning the future welfare of the embryo, after its escape from its intrauterine prison. Of course (notwithstanding its efficaciousness), all women, during pregnancy, can not be surrounded by beautiful paintings and inspiring sacred melodies issuing from myriad-tongued musical instruments and from the vocal cords of such renowned singers as Patti and Bernhardt; yet there are few who can not, by the exercise of sound judgment and will power, manage to control their temper and ward off nerve storms which result so disastrously to the nervous system of the embryo which, when it reaches maturity, if it ever does, will present a picture analogous to those who stand in the shadow of lost hopes and fallen ideals.

Acquired Causes.—It may result from various chronic diseases, mental worry or emotion, overwork, as according to Jackson, "When the expenditure of nerve force is greater than the daily income, physical bankruptcy, sooner or later, results." A neurotic temperament, sexual excesses, alcoholism and the tobacco habit are contributing causes. The cares and anxieties attendant upon the gaining of a livelihood, in persons who have inherited a feeble organization, predisposes them to neurasthenia.

The older writers referred to neurasthenia as irritable weakness, and later spinal irritation seems to be the only term by which this condition was designated. Persons suffering from neurasthenia lose the distinction between essentials and non-essentials; things that would be regarded lightly by normal individuals causes then great annoyance, and the entire organism reacts with unnecessary readiness to slight stimuli.

Neurasthenia may follow the infectious diseases, particularly influenza, typhoid fever, and syphilis. The morphine habit may lead to a high grade of neurasthenia, though the drug habit is more often a result, rather than a cause, of the neurasthenia. Other potent causes, though less easily dealt with, are the worries attendant upon love affairs, religious doubts, and domestic troubles. The traumatic forms, especially those following upon railway accidents, while interesting, can not be discussed in the time allowed for this paper. The traumatic cases may be divided into three groups, simple neurasthenia, cases with marked hysterical manifestations, and cases with severe symptoms, indicating or simulating organic disease.

Symptoms.—The army of symptoms attendant on nervousness are manifested in their most aggravated form in neurasthenia. One of the earliest manifestations of nervous exhaustion is an irritability, or weakness of the mental faculties, as shown by inability to concentrate the thoughts, and efforts to do so causing headache, vertigo, restlessness, fear, and a feeling of weariness and depression.

There may be ocular disturbances, cardiac palpitation, coldness of the hands and feet, chilliness, followed by flashes of heat; followed, in turn, by slight sweating, insomnia or fatiguing sleep, accompanied by unpleasant dreams, are other conspicuous symptoms. Genito-urinary disorders are frequent in the male, with pains in the back, giving the dread of impotence; in the female is found a painful menstruation, ovarian irritation and irritable uterus.

The "neurasthenic stigmata" are: Feeling of pressure on the head, disturbances of sleep, pain in back, muscular weakness, dyspepsia, sexual disturbances, and mental disturbances. In all forms there is a striking lack of accordance between the symptoms of which the patient complains and the objective changes discoverable by

the physician. Hyperesthesia, especially to sensations of pain, characterizes almost all neurasthenic individuals. The sensations are nearly always referred to some *special* region of the body—the skin, eye muscles, the joints, the blood vessels, or the viscera. It is frequently possible to localize a number of points painful to pressure.

The so-called "irritable humor" is very noticeable, if such pathological sensations continue for a long time, and the mood and character of the patient gradually alters. Many obnoxiously egotistic individuals met with in daily life, are in reality examples of psychic neurasthenia. The neurasthenic is very dogmatic, and demands the greatest consideration for his condition; to merit his esteem and confidence his desires must be immediately granted. He may, however, have but little consideration for others, and some there are who derive much pleasure from making others unhappy.

The so-called "anxiety conditions" are always present in advanced cases. In the simpler forms of anxiety (nosophobic) there may be only a fear of impending insanity, or of approaching death, or of apoplexy. In many the anxiety becomes intense, and the patients are restless, and declare that they do not care to live; they may throw themselves upon a bed, crying and complaining, and making convulsive movements with the hands and feet. Some patients complain that a definite word, a name, number, a melody, or a song, is continually running through their mind, in spite of all he can do to abolish it.

In the severer cases of psychic neurasthenia, the so-called "phobias" are common; the most frequent form is agoraphobia, in which patients, on coming into an open space, are oppressed by an exaggerated feeling of anxiety; they begin to tremble all over, they complain of palpitation of the heart and compression of the thorax, profuse perspiration, and a feeling as though chained to the ground is another symptom frequently complained of. Others are afraid to be left alone (monophobia), or in a closed compartment (claustrophobia). Some fear people and society (anthrophobia). A series of other phobias have been described—batophobia, or fear that high things will fall; pathophobia, fear of disease, and astrophobia, fear of thunder and lightning. Occasionally, there are some who are afraid of everything and every one, victims of the so-called pantophobia.

The reflexes in neurasthenia are usually increased, the deep reflexes, especially, never being absent. There may be inequality of the pupils in neurasthenia. Of all the symptoms common to all types of the condition in question, introspection, with gloomy forebodings and depressed spirits, seem to be the most constant. They see the world in the light depicted in these verses from Longfellow:

My life is cold, and dark, and dreary;
It rains, and the wind is never weary;
My thoughts still cling to the mouldering past,
But the hopes of youth fall thick in the blast,
And the days are dark and dreary.

Our days are covered o'er with grief,
And sorrows neither few nor brief
Veil all in gloom;
Left desolate of real good,
Within this cheerless solitude
No pleasures bloom.

And fortunate, indeed, is the physician who can change these pessimistic views of his neurasthenic patient and force upon them the optimism contained in the following lines:

Be still, sad heart! and cease repining;
Behind the clouds is the sun still shining;
Thy fate is the common fate of all,
Into each life some rain must fall,
Some days must be dark and dreary.

Enjoy the spring of Love and Youth,
To some good angel leave the rest;
For time will teach thee soon the truth,
There are no birds in last year's nest!

Treatment.—I should like to speak of the prophylaxis, as it is of vast importance, but have not the time to consider it at present. There is no routine treatment for neurasthenia, since every individual is a law unto itself. In general, it will be the aim of the medical adviser to remove the patient as far as possible from the influences which have led to his downfall, and restore the equilibrium of the nervous system, which is always destroyed in neurasthenic patients.

Many patients come under our care too late for satisfactory treatment, but I shall outline the treatment for neurasthenia from its incipiency. The physician must

in the beginning inform his patient that without his co-operation, with regard to observing the rules of taking food, sleep, and mental work, little can be accomplished. Also tell him that it will take several weeks and probably months to effect a cure. By all means gain the confidence of the patient. While some physicians advise absolute rest, both mental and physical, I believe in all except the most advanced cases, moderate physical and intellectual exercises, alternated frequently with rest and the administration of food, is best.

Hospital or sanitarium surroundings, with judicious nursing, is to be desired. Hydrotheraphy is indicated in all cases; the wet pack for insomnia having advantage over all somnifacients. Salt baths, various forms of douches, partial packs, foot baths, all being invigorating. General and local faradization, galvanic electricity, and franklinization may be used in every case by skilled operators.

Treatment by drugs should be avoided as much as possible. Alcohol, chloral, cocaine or morphia should never be given. If anemia is present, arsenic and iron are indicated. Phosphorus is overrated. For pains and nervous attacks, the salts of ammonium, potassium and sodium are indicated.

Where the anxiety conditions are disturbing, cautious use of opium may be resorted to. Prolonged treatment with opium is, however, never necessary in neurasthenia, and should be condemned.

2527 North Taylor Avenue.

World-Wide Recognition.

We are pleased to call attention to the fact that an article entitled, "Medicine at the Time of Homer," written by N. Benakis, M. D., Smyrna, Asia Minor, and translated from the Greek for THE MEDICAL BRIEF by Dr. A. Rose, New York City, has been reproduced in two German journals. This article was printed in the BRIEF in November, 1906. It is gratifying to know that articles supplied to the BRIEF in original form have such a world-wide significance. It shows that the BRIEF is read in all countries on the globe, and that its articles are translated into all languages. The BRIEF is not only national, but international.

[Written for the MEDICAL BRIEF.]

Medical Ethics.

BY S. E. GIBBS, M. D.,
New York City.

There is, perhaps, no subject in the broad domain of medicine that has been so much discussed, argued about, and wrangled over, from time immemorial, as the subject of "Medical Ethics." So that it may not be amiss to ask the question, What is medical ethics, and of what does it consist?

It would be impossible, in the short space allotted me, to give a full definition of ethics, the subject being too vast and complicated. It will be sufficient, however, for the present purpose, to define it briefly as the science of human duty, the science of right, and of right character and conduct; in other words, moral science.

Medical ethics, therefore, would mean the application of these principles to the relationship which exists between the various members of the medical profession and their conduct toward each other, and one of the objects of our various societies and associations is to further these principles, the foundation of which dates back as far as the golden rule, in obedience to which it is understood that every member of the profession should be ever careful not to infringe upon the rights, nor to endeavor in any manner to secure advantage to himself to the detriment of his fellow practitioners.

To all of the above propositions almost every member of the profession is ready to subscribe in the abstract. But in these practical days, competition being keen, and the struggle for existence intense, owing in great measure to the over-crowded condition of the profession, the vast combinations of capital in the various large hospitals, dispensaries, and other institutions, it becomes too often a question how far one may go in violation of those principles and still remain within the limits of the Code of Ethics. A very narrow margin, it is true, but still a margin, so that we see almost daily and in various ways a tendency to overstep the line. Sometimes it would appear almost involuntarily; sometimes, but more rarely, in-

tentionally, and it may be well to inquire in what ways this code of ethics is so often violated, and by whom? And first and foremost must be mentioned the modern hospital and dispensary. The original object of the hospital was to provide medical and surgical treatment for those unfortunate persons who were too poor to pay for the services of the physician or surgeon. Certainly a laudable object. But the times have changed. The hospital today is simply a first-class hotel, with medical attendance supplied free of cost. The dispensary still feebly welcomes the poor, but prefers the rich patient, and the proportion of the latter, or at least of those who are able to pay something, is greatly in excess of the former, as witness the vast number of patients treated in those institutions in this and other cities during the past year, according to their own published reports, and the treatment of every patient who was able to pay something, be it ever so little, was, in the opinion of the writer, a direct violation of the code, for it was done at the expense of the profession at large, the members of which were of necessity the pecuniary sufferers.

Another way in which the code of ethics is frequently infringed, is by the advertising in the daily newspapers of important operations which have been, or are about to be, performed on prominent persons, especially where the name and address of the operator is mentioned, thereby attracting undue attention to himself and his assistants.

In many of these reported cases every step in the operation, even to the smallest detail, has been minutely described, so that the inference is that the information must have been given to the reporter either by the operator himself or by one of his assistants, with the full consent of the former, for there is no record of any reprimand ever having been administered to the person giving the information, and the same assistants have, subsequently, participated in operations by the same surgeon, and with the same result.

Again, the issuing of bulletins in cases of sickness occurring in the family of wealthy or prominent persons. While it may be quite proper to inform the public of the progress of the patient toward recovery or otherwise, it is too often made a pretext for advertising and keeping in the public mind the names of the medical attendants.

Every physician knows that the frequent, very slight fluctuations of pulse or temperature in a severe case of illness means little, or nothing, yet in many of these cases a variation of even two-tenths of a degree in temperature, or an increase or decrease in the pulse rate in the slightest degree, is promptly telegraphed from one end of the country to the other, and the names of the doctors in attendance often occupy the larger space on the bulletin board.

The spirit of the code of ethics is also violated by the publication of long articles in the newspapers on surgical topics, sometimes giving a full description of the symptoms, progress, complications, indications for operation, etc., in some cases such details occupying half a page of a Sunday newspaper, and bearing the signature, not of some noted quack, but of a wealthy surgeon in good standing in several medical societies, while should the less rich and more obscure surgeon adopt the same tactics for the purpose of attracting attention to himself (who so much needs it), the result would be that charges would be preferred against him in his medical society, on the ground of unprofessional conduct.

The consultation also offers a wide opportunity for the infringement of the code. How often does it happen that the consulting physician ingratiates himself so thoroughly during his interview with the patient or his family that in subsequent cases of sickness in the said family the faithful doctor, who has been in attendance for many years, finds himself supplanted by the former consultant.

Among the lesser sins against the code of ethics (if such a distinction be permissible) is the indiscriminate distribution of reprints of articles on medical or surgical subjects, carelessly or purposely mailed to patients, or placed in large numbers in the reception room in such position as to attract the attention of the waiting patient.

The "cipher code" prescription, intended to be interpreted only by some especially-designated druggist, while working injury

to the neighboring druggists, most of whom are honorable men, also reflects upon the medical profession to some extent by creating in the mind of the patient the impression that the doctor so prescribing is in possession of some wonderful and valuable secret remedy, unavailable to other physicians.

The emergency call, in a case of accident, where the details are furnished to the newspaper reporter, together with the attending physician's full name and office address, even when these are not required and can serve no useful purpose, other than to advertise the doctor.

The presentation of the physician's photograph and biography or autobiography to the press reporter, to be published, together with those of the prominent men in a city, town, or county.

The giving of so-called "health talks" in public halls to miscellaneous audiences, which, though of some benefit to the public, is usually undertaken more for the purpose of attracting attention to the lecturer than a sincere solicitation for the welfare of the public.

The occupying of a front seat in church, and the hurried entrance during the service, in a breathless condition, medicine case in hand. The often unnecessary call-out during the service, or while in attendance at the theater, may also be classed among the minor infringements of the code.

To which might also be added the joining of so-called benefit societies, medical bureaus, surgical institutes, etc., for the privilege of attending the members thereof for the munificent compensation of one dollar a year per member.

All these and many other infringements of the medical code that might be mentioned, did space permit, are inconsistent with that respect for the code of ethics which should be felt by every member of the honorable profession of medicine.

22 East One Hundred and Twenty-Sixth Street.

Inclosed find check for one dollar, for which send the BRIEF. I have not been a reader of the BRIEF very long, but in every number I find something new and instructive.—B. FRANKLIN, M. D., Cascilla, Miss.

[Written for the MEDICAL BRIEF.]

Homeopathy vs. Allopathy—Comparative Materia Medica and Therapeutics.

BY N. SISCA, M. D.,
Killarney, Queensland, Australia.

(Continued from page 227.)

X.

By far the most striking evidence of the steady and uninterrupted progress homeopathy is making, is the vast amount of material it has accumulated in its *materia medica* during the last thirty years or so. Time was, and not very long ago either, when all the *materia medica*, which it was thought indispensable for a homeopathic practitioner to know, was enclosed within the two hundred and sixty-three pages of a small book entitled "The Principal Uses of the Sixteen Most Important and Fourteen Supplementary Homeopathic Medicines," while now a mere glance at the three ponderous volumes of the "Dictionary of the Homeopathic Materia Medica," by Dr. J. H. Clarke, or at the four still more ponderous volumes of "The Cyclopedia of Drug Pathogenesy," without mentioning their respective repertories, is quite enough to bewilder any would-be student of homeopathy. For the matter of that, the homeopaths themselves are beginning to groan under the weight of their own wealth, and a few years ago one of them went so far as to say: "What constitutes our *materia medica* today is a chaotic accumulation of subjective symptoms, real and fictitious, which out-rivals in grotesqueness the imagination of a Kipling, and would confound the intelligence of a Judge of the Supreme Court." "But this," a cool-headed Hahnemannian would say, "is downright pessimism. There may be something like a *farrago divitiarum*, but surely we can be trusted to evolve order even out of that."

Be that, however, as it may, any allopath, who may be willing to learn for himself what homeopathy really is, need not be discouraged. Hughes' "Pharmacodynamics" is still in print, and though it has come in of late for a good deal of snubbing on the part of one and another, who, like ungrateful pupils, have somehow become ashamed of their humble,

but none the less worthy, pedagogue, it yet remains, so far as it goes, the most readable, intelligible and reliable book in the English language, that can be recommended as a guide to the study of homeopathy for a beginner.

Dr. Hughes defines the homeopathic *materia medica* "the record of the pathogenetic effects of the medicines used by homeopathy." All the substances, which, by their provings on the healthy, have made good their claim to be recognized as homeopathic remedies, have their place in it; and, as we have already seen, by pathogenetic effects is meant the symptoms produced by drugs in the human body in a state of health. We allopaths are just beginning to revive an old theory under a new name that, namely, of "pathogenic therapeutics," in the sense of adapting the treatment of disease to our knowledge of the way in which disease is produced, or, in other words, to our knowledge of the process of evolution of the various disturbances and alterations which in any given case culminate into the nosological entity called disease. But homeopathy has had its pathogenic therapeutics since the time of Hahnemann, only in quite another sense, viz.: that instead of trying to ascertain and follow step by step the mode of production of disease, which, by the bye, and as we all know only too well, is more easily said than done, homeopathy proves a drug on the healthy, thus producing an artificial disease; and after putting down to the credit of that drug the artificial symptoms it has thus caused, holds itself ready to use that same drug as a remedy for a case of real disease, whose symptoms happen to be the same as, or the nearest approach to, those of the artificial one. And this in accordance, not with Dr. or Professor So-and-So's theory, but only and solely in accordance with a principle, which homeopathy has adopted as the law of its practice, the so-called law of similars.

Let us now compare notes, as it were, for a moment, and see whether it is true or not that while homeopathy on one side has for over a century stood with its feet on the immovable ground of its fundamental principle, allopathy, on the other, has been slowly but surely turning round and round, until today a very important part of what homeopathy has always contended for, is, in substance, if not in as many words, plainly and fully recognized by allopathic lecturers and authors.

In one of the chapters on general therapeutics in his "Consultations Médicales" (1901), Dr. Huchard, the well-known cardiopath of l' hôpital Necker in Paris, after briefly reviewing the many theories of the genesis of disease, which from time to time have rivalled one another in directing and controlling medical practice in the past, says: "It is time we should shake off the yoke of the tyrannical doctrine which by always making of disease a consequence of the lesion has for a long number of years paralyzed our therapeutic activity. The lesions of arteriosclerosis are preceded by a phase of functional troubles, due to a state more or less pronounced of vascular hypertension. This is the so-called stage of presclerosis *when as yet there are no lesions*,* and, what is still more important, this is the stage when treatment is really efficacious in doing the only thing there is to do, namely, to ward off the impending exhaustion of the arterial system. * * * I am one of those who think with A. Robin that 'if the function makes the organ, it is the disease of the function that produces the lesion of the organ.'"

It is the function, then, that, according to those two among the foremost therapeutists of the French school of today, has the first claim to our attention, if we want to treat disease successfully. But how shall we know that the function of an organ is disease? We can only know it by a study of its symptoms, and this is nothing else but pure and simple homeopathy. As I said in my last note, homeopathy has always taken the clinical aspect of disease as its working basis, and here we have two highly accredited representatives of one of the most advanced medical schools in Europe proclaiming in language which can not be misunderstood, the paramount importance of clinical therapeutics. For over a century, from Hahnemann downwards, the homeopaths have been ringing in our ears that it is the symptoms of diseased func-

*Italics mine.

tions that can give us the most reliable, if not the only, clew to the knowledge of disease; that the study of symptoms is the "royal road" to rational treatment, and that there are innumerable cases in which disease exists without having yet had the time to produce lesions, and in which, therefore, symptoms are the only thing we have to depend upon. But we have called them heretics, and yet, alas! it almost seems as if all of us were going to become heretics before long.

The homeopathic *materia medica* contains the pathogeneses of over three hundred remedies, which, according to their therapeutic importance, may be divided into three classes: First, those which, owing to their wide range of action and the thoroughness of their provings, are mostly in demand in every-day practice, and which are called "polychrests," like aconitum napellus, belladonna, bryonia alba, etc.; second, those whose symptomatology is not so extensive and whose range of action is more limited, like baptisia, chelidonium, lycopodium, etc.; third, those which have only a few symptoms to their credit, like bovista, cicuta, mezereun, etc.

It has often been said that one of the reasons why allopaths should have nothing to do with homeopaths is, that the latter use medicines in their practice which nobody but themselves knows anything about, and it is no doubt true that homeopathy has called into being as remedial agents a large number of substances quite unknown to us, except perhaps by name and which, had it not been for that, would have remained useless. Thus among the pathogeneses contained in its *materia medica* there are those of about one hundred and thirty plants, of several metals in their simple metallic state, of viruses of serpents, vipers, spiders and bees, etc., with which we are as yet entirely unacquainted, except in cases in which homeopathic remedies have been "rediscovered" by allopaths; but why this should be alleged as a reason for our ignoring homeopathy and the homeopaths I can not see. Their books and periodicals are accessible to everybody, and if the medicines they use and the way the use them are unknown to us, that is n fault of theirs.

Homeopathy has no purgatives, a tringents, hypnotics, sudorifics, diuretic etc., as such. The use of a drastic o cathartic medicine, as we understand i is incompatible with the principles o homeopathy. There are numerous home opathic medicines which are used as rem edies for constipation, but they are s used because among the symptoms whic they produce when given in large dose there is constipation, such as nux vomica bryonia, opium, plumbum, etc. In cases however, in which prompt and thorough emptying of the bowels is urgently re quired, the homeopathic physician resorts as a rule, to enemata.

Astringents, in the sense of anti-diar rheics, are not needed in homeopathic practice; but there are plenty of remedies in the homeopathic *materia medica* which are used to check diarrhea, and among them are to be found a good few of the medicines which we use as purgatives, like aloes, jalap, magnesia, mercurius, podophyllum, rheum, etc.

Homeopathy uses our hynotics to keep people awake, like opium and chloral, for instance, in sleepiness and such like complaints, and so forth, but I do not think it is correct to say that the homeopathic *materia medica* contains no stimulants, sedatives, antispasmodics or anesthetics. What are nux vomica and bryonia in their action on the intestines but stimulants, and belladonna, hyoscyamus and stramonium but sedatives? Where is a better antispasmodic than cuprum, and what is cantharis in its action on burns but an anesthetic?

Finally, a word about "repertories," or "finding-means," as Dr. Hughes calls them. A repertory in homeopathic literature is a sort of companion to the *materia medica*. The difference between the two is, that the *materia medica* under the heading of a remedy gives a list of all the symptoms caused by it, while the repertory under the heading of a symptom gives a list of all the remedies which have that symptom in their pathogenesy.

[Written for the MEDICAL BRIEF.]

Irritations of the Respiratory Mucous Membrane.

BY EDW. C. ROTHROCK, M. D.,
Palestine, Texas.

In respiratory diseases, such food should be used as judgment and experience would dictate, and, of course, food to suit the taste of the patient. Water, acidulated lemonade, should be allowed, and is very pleasant and of benefit to the patient. Food should be given in small quantities and at short intervals, every two or three hours, as required to maintain the vital powers. If food is given in excess it will do harm, distress the patient by fermentation and flatulent distention of the stomach and bowels, and impede the already embarrassed respiration, and when the blood is surcharged with nutritive material a further burden will be placed upon the lungs in the effort for its assimilation. No food or drug should be used that would irritate, nauseate the stomach and interfere with the appetite, digestion and assimilation, for the vital forces must be maintained, an excess of food avoided and care taken as to its quality. Depressing drugs have often, in children, caused untoward effects, as they are very susceptible to such action. In some cases respiration becomes greatly embarrassed, circulation fails, which is evident by rapid and labored breathing, and cyanosis is present, caused by carbon dioxide. The high temperature and inflammatory action increase more and more, embarrassing the respiratory organs and the functions of the heart. Great strain is put upon the lungs and heart, which already are doing double duty. The blood not being properly oxidized in the lungs a failure of the respiration is evident, and untoward effects will take place without relief.

A failure of respiration is more to be dreaded in children than heart failure. Stasis of the lungs must be prevented by stimulating the heart, drawing the blood into the arteries as much as possible from the veins, and thus relieve to some extent the engorged venous system and the obstructed pulmonary organs. Alcohol undoubtedly is the best stimulant, particularly for children, and is preferable to others. A child of one or two years of age can have ten to twenty drops of whisky—according to age and conditions existing—diluted with water, and sugar added; a little nutmeg will be of advantage; this given every one, two or three hours, of course, to be increased or diminished, according to the urgency of the case. If great prostration or septic condition alcohol is of the greatest benefit in maintaining the tonicity of the heart, hence sustaining the vital forces. Alcoholic stimulants should not be given in doses of over one or two ounces in three or four hours to adults, for over that amount will not be oxidized and will, perhaps, do harm. In simple attacks alcohol should be used, if at all, with caution, and cases which frequently occur when it will not be needed. A saturated tincture of camphor, one-half to two drops, for children; adults two to five drops, every one or two hours, in depression, is a valuable stimulant. Caffeine often has a good effect; dose for children, one-sixteenth to one-eighth grain; adults, one to five grains. Caffeine in small doses stimulates the heart, quickens its action, raises blood pressure, stimulates cerebral functions, is a diuretic by stimulating the secreting apparatus of the kidneys. Large doses have a different effect, depress the heart and respiration, pulse becomes small, irregular and intermittent. Larger doses paralyze the cardiac muscle and its motor ganglia, and death is by paralysis of respiration. As a stimulant, I prefer alcohol, and particularly for children. Next to alcohol, the nitrites, nitrite of sodium; its action is similar to nitroglycerin. It is very useful in the treatment of epilepsy, asthma, angina pectoris, and attacks of cardiac dyspnea. Nitroglycerin, in small doses, is efficient in respiratory neuroses, as asthma, whooping cough, laryngismus stridulus, etc., and lasting in its effects, producing great vascular dilatation, and hence lowering blood pressure by paralyzing the vaso-motor center, emptying the veins into the arteries, as it were, and relieving the right side of the heart, and, therefore, the engorged condition of the lungs. A child one or two years old could take of nitroglycerin one two-hundred-and-fiftieth to one three-hun-

dredth of a grain every two or three hours, as indicated.

Nitroglycerin, in large doses, produces tumultuous action of the heart by relaxation of its inhibitory apparatus and impairment of the ozonizing function of the blood. Therefore, it should be administered in very small doses. In some cases I prefer nitroglycerin to digitalis, or strophanthus, as the last two produce blood pressure. A good stimulant to the heart and respiratory functions is sulphate strychnine, one four-hundredth to one-five-hundredth can be given to children every two, three or four hours. It stimulates the nervous system, produces blood pressure in small doses, but in larger doses it lowers blood pressure as tolerance is had. It is seldom that I use strychnine for children, as I prefer other remedies.

[Written for the MEDICAL BRIEF.]

Jewish Physicians of the Past and Present.

BY OSWALD W. KATZ, M. S.,
Boston, Mass.

The ancient Hebrew regarded health and disease as emanating from the same divine source: "I kill and I make alive; I wound and I heal" (Deut. xxxii., 39), said the Lord through his servant Moses; and, therefore, they who administer to the health of their fellows are regarded as the messengers of God, as the executors of His will. Joseph employed house physicians (Genesis i., 2) and Isaiah mentions a surgeon and wound-dresser (Isa. iii., 7). Afterwards the status of the medical profession became still more exalted. The court of justice employed in certain cases the services of a physician, whose expert testimony was decisive in criminal matters. Corporeal punishment was inflicted under the supervision of a physician. No physician was permitted to practice without a license from the local judicial council. Every city was required to have at least one physician.

The medical profession, at that time, received comparatively large fees. A current saying was, "A physician who takes nothing is worth nothing."

The subcutaneous stretching or cutting of the cord and obliteration of the testicle by means of gradual pressure is reported in Lev. xii., 24. In an accident in which the abdominal viscera were protruding through a wound, the position of the organ was effected automatically by frightening the patient, which caused the abdominal muscles to relax. After this the external wound was closed by sutures.

Harun al Rashid (789-806) was the founder of a medical university in Bagdad. He and his associate professors were Jews of the highest class and the best medical knowledge. Of course, it is impossible to classify all Jewish physicians at that time, but it is a well-known fact that the Cæsars of the Roman empire, the Kings of Spain and of other countries, employed Jewish physicians for their own service and the service of their households. Even the Popes, as Boniface VIII, had Jewish physicians. Bishop John I and his successor, John II, permitted a woman, Sarah Seligman, to practice medicine in Austria.

The Jewish and Christian church were all opposed to a desecration of the human body, such as proper anatomical investigations would have required. The German Emperor Frederick II (1212-1256) permitted dissection, but Pope Boniface VIII prohibited it.

The French Revolution brought a great change in the status of Jewish physicians. Jews were admitted to study in all universities and practice their profession. Even in Russia today many Jewish physicians are found, but it is especially in England, Germany, Austria and the United States that Jews have become prominent as general practitioners, specialists, university professors of medicine and medical journalists.

The first Jewish physician mentioned in colonial times in the United States is Jacob Lumbroza, who practiced medicine about 1639 in Maryland. The number of Jewish physicians in the United States is very large; but only a few, mainly those who have acquired some high official position, can be mentioned here. The physiologists, D. Reisman, R. Stein; the pathologists, A. Abrams, I. Adler, S. Fexner; the surgeons, W. Meyer, Joseph Raushoff, N. E. Bull, Solis Cohen, A. Jacoby, I. Loeb, and the Surgeon-Gen-

eral of the United States Marine Hospital service, R. Weyman.

Most Jews are inclined to follow the regular teachings of medicine, but recently the homeopathic medical colleges are reporting a great number of Jewish students.

In the present strife for success, in the battle of life, we do not recognize any more race or religion. It is "all for one, and one for all!" I, myself, have the honor to serve in a homeopathic institution, where, among three hundred physicians, nurses, etc., I am the only Jew, but I can pay the highest tribute to those disciples of our divine profession that never in my sixteen months' service have I ever heard an utterance against my race or my religion. Doctors and nurses stood by me in joys and sorrows, always anxious to give a helping hand; but, of course, this is "the land of the free and the home of tne brave," so thank God for America.

[Written for the MEDICAL BRIEF.]

On Single Remedy Dose Treatment.

BY C. B. KING, M. D.,
Atlanta, Ga.

What is eclecticism? What is an eclectic physician? I understand he is properly of that class of physicians educated, not only in diagnosis of diseases and symptoms—pathological—but in chemistry, physiology, anatomy and surgery; but fully taught medical therapeutics that he may be able to administer, as in his own skilled judgment, just such remedies as he may select or elect in his mind, from education, observation and long experience such remedies alone or in proper combinations will relieve—not the symptom which only indicates, as smoke does where the fire is, and not the cause—for cold weather may have been the cause—but to relieve the deviation and nature cures. Medicine never did cure anything. We can unload the stomach with a little apamorphia or lobelia, ipecac or sulphate of zinc, as we may select or choose; we can empty the bowels with cathartics or enemas. We can tranquilize the nervous system. We can equalize circulation, thereby giving nature a chance to relieve congestion, pain, etc. We can open the pores almost at a touch with properly prepared hot sponge bath energising them to active functions, and thereby nature will rapidly eliminate pent-up toxins, leucomains, or ptomains from our patient's system. We can strengthen nerve energies of an enervated system. Assist digestion, improve the metabolic process, but after all *vis medicatrix naturæ* has to do the curing or healing. All the salves in creation will not heal a sore; they do good, no doubt, properly compounded and applied, but old nature heals herself. So what I am trying to do is to iconoclasticly "rip 'em up the back," or knock down some men's ideas about giving eclectics—professors in colleges—editing eclectic medical journals, proposing to teach the young who want to become the healers of the sick when we old fellows, with our fifty years' experience, have passed away. And these very bright, well-educated young men know no better than to believe what they are taught by such "three-wheeled wagons" in their lectures, and in their journals, that you must give only one single remedy at a time. If that does not *cure*, then try another. You have plenty to draw from. Yes, but what becomes of the patient while you are practicing on him. He may cease to draw his breath. Then the papers will say he died after all that medical skill could do for him. And next day the minister—good man—will say his course in life was run; his time to go had come; he has gone to rest—the good Lord had called him home. And the doctor goes off, whitewashed, no doubt, hoping that he may do better with his next case. And he is taught to give a single remedy in a common or severe persistent sore throat, or slight persistent tonsillitis. If you give aconite, give it only. If you give sanguinaria, give it alone. If you give echinacea, give it alone. If you give stillingia, give it alone. Be an eclectic. If you give collinsonia, give it alone. If you give phytolacca, give it alone. Syrup wild cherry, give it alone. When I will take all of these properly combined in medical doses, put up in syrup of wild cherry, so as to give one teaspoonful every two hours, and invariably the patient (with few grains calcium iodide three times a day, with hot Epsom

salts, both at bedtime, and dose of Epsom salts in the morning), will soon be entirely well.

Our argument to the student or young doctor who is trying to learn after he leaves college, where he should be thoroughly skilled or taught, if necessary to relieve the sick, to combine a dozen therapeutic agents to overcome any deviation from a normal condition. But he is told if he gives more than one remedy at a time he can not tell which cured his patient. What does the patient know or care what helped him. It is relief he wants. What should the physician care, only to know that he does know by the pulse, the color of the eyes, the ears and skin, temperature and respiration, without looking at the tongue or asking a question, whether it is retention, invasion or enervation, or two of these three only natural causes for disease; and how to restore normal conditions with a rational treatment, once learned or correctly taught to him, will never be forgotten, and will ever serve him faithfully. But this single remedy doses so-called eclecticism, which is not so any more than Dunglison's definition of eclect meaning a "quack," reminds me as if they are afraid of our taxing the system with several different congenially indicated specific remedies combined, or of fearing to feed a man meat and bread, both at the same time, for fear of overtaxing the digestive apparatus; so we will give some bread—when it is writ, "Man shall not live on bread alone," then, in a few minutes, give some meat; and after a little while, at proper intervals, all day, will give potatoes, rice, chicken, turkey, pie, cake, pastry—all separately, to give nature a chance to digest and properly dispose of each, as it would be a great task for her to take hold of all these at once in the stomach. What folly, what absurdity, to think of not giving two or more purely congenial or compatible and indicated remedies at the same time. And the trouble with that professor and that school who are working so hard to get their young graduates to use single remedies in order to know which cures, when, perhaps, the single remedy did not open the pent-up pores, dilate the constricted capillaries, tranquilize the nervous system, neutralize the ptomain, open up the alimentary canal and let the patient get well. In proper combination of congenial remedies in pneumonia, for instance, all this can be done in the first, or congestive stage, and your patient can be cured in a few hours, and not have to pass through the second and third stages. And so with pleurisy, bronchitis and la grippe. Colic, whether hepatic or nephritic, also that dangerous thing, acute indigestion, relieved in a few minutes when the single remedy man would cause a funeral to take place; yet he may have done, and no doubt did, the best he knew. He had been taught that way. But he will soon learn better (at the cost of his patients), and will regard the teachings of those of his alma mater in their proper light—darkness.

[Written for the MEDICAL BRIEF.]

Gonorrheal Rheumatism.

BY SILAS HUBBARD, M. D.,
East Aurora, N. Y.

I will offer a reason and ask others to give a reason in the BRIEF why more men have the above-named complaint than women.

The reason, I suppose, is because the gonococci have easier access to a larger area of space of provender than in men.

The gonococci in women, besides having an easy access to the urethra, as in men, also have free access to the whole vagina, and then have free access to the internal structure of the uterus, and from thence through the fallopian tubes, causing salpingitis, etc., while with men the gonococci have to seek other structures, consequently their joints oftener become affected. Indeed, I have seen men very much crippled by the infection by a woman, while said woman went free from being crippled. It should be a warning to men not to expose themselves to the disease.

I received a copy of the BRIEF, and it was with pleasure that I read it. As a result, inclosed find one dollar for 1907. —FREDERICK DUGDALE, M. D., Sunny Brook, Md.

[Written for the MEDICAL BRIEF.]

Prescription and Proprietary.

BY C. S. CARR, M. D.,
Columbus, Ohio.

A proprietary medicine is a medicine the sale of which is, in some measure, controlled by the person who devised or formulated it. For instance, suppose some doctor has a recipe which he has used a great deal, and found it to be very efficacious in certain diseases. He finally concludes to manufacture the recipe on a large scale, and furnish it to the drug stores, with directions for use. His medicine would then be called a proprietary medicine. So long as the doctor continued to write the recipe, give it to his patients, and allow them to get it filled at the drug store, it would not be called a proprietary medicine.

As to the difference between a proprietary medicine and a prescription, there is no difference at all in which the patient is interested. If a doctor prescribes over and over again a formula which he finds very useful, he is doing exactly the same thing, so far as his patients are concerned, as if he had prepared the medicine himself and furnished it directly to his patients.

The main reason that certain doctors object to proprietary medicines is that the patient can go to the drug store and get a proprietary medicine without consulting a doctor. The doctors object to this, many of them conscientiously.

There are several objections. It is assumed, on the part of the doctor, that a patient is not competent to select the remedy he needs without a doctor's assistance; that he should first go to the doctor, not only to find out what his disease is, but to receive instruction as to what remedy or remedies he had better purchase.

But even where the patient already knows what his disease is, has gone to the doctor many times, and different doctors have told him what his disease is, so that there is no necessity for him to receive diagnosis, the doctor would still contend that he is further needed in the selection of remedies.

When the patient can go to the drug store, however, and find a medicine already prescribed for his disease, by a doctor, accompanied with directions for use, there is, in reality, no need for the patient to see any doctor.

It is usually a doctor who first compounds a proprietary medicine. Let us say it is a medicine for rheumatism. He generally has had extensive experience in treating rheumatism, and has found some combination of drugs especially efficacious. He puts up the remedy, and gives ample directions for its use, in plain English, and if the patient already knows he has rheumatism there does not seem to be any valid objection to his going directly to the drug store and purchasing the remedy for himself. Indeed, there is no objection, if the interest of the patient only is consulted.

It is to the doctor's interest, in many ways, that the patient should consult him every time he gets a medicine at the drug store. The doctors have always objected to patients getting prescriptions refilled. When a doctor prescribes a remedy for a patient he does not like to have the patient go back to the drug store and get the bottle refilled, even though the medicine has helped him. He prefers to have the patient come to him each time he has the prescription refilled, so he may be able to judge whether the patient should take that particular prescription any longer, or whether a change should be made.

In many cases this is, doubtless, a benefit to the patient. Sometimes the doctors are obliged to prescribe narcotics or nervines. If a doctor is wise he does not care to have the patient use such medicines long enough to acquire a drug habit. If the patient is allowed to go to the drug store and get the prescription filled as often as he pleases he might, unwittingly, get into the habit of taking a narcotic. Indeed, this often happens, and the doctor is, therefore, justified in his opposition to the practice of getting prescriptions refilled. But when the doctor prescribes something that does not contain any narcotics or objectionable drugs, something that can be taken indefinitely without danger of producing a drug habit, there is practically no objection to the patient's

getting the prescription refilled as long as he thinks he needs it.

If a patient has been told by different doctors that he has rheumatism, and some doctor has devised a remedy for rheumatism, manufactured it, and placed it in the drug store for sale, with directions for use, there can be no possible objection, from the standpoint of the patient, to his going to the drug store, buying this other doctor's remedy, and taking it as long as he finds it helps him.

The doctors object, however, chiefly because every such patient is a loss to themselves. If the patients get in the habit of going to the drug store and purchasing outright remedies for rheumatism, or dyspepsia, or catarrh, or any other chronic disease, then the doctors, of course, would lose a great many valuable customers. They prefer to have the patient consult them every time he gets medicine, because each time the patient consults them they get a fee for the consultation.

"But," it might be said, "surely the doctors would not plead guilty to such a selfish motive as this. They must have some excuse for taking such an attitude towards the interest of the patient. What do they say to justify their attitude?" The doctors say something like this: That even if a patient knows he has rheumatism, it does not follow that any one remedy for rheumatism should be continually taken. They say that the disease should be treated from time to time for such changes as are indicated by the patient's symptoms. A very excellent remedy for rheumatism might do for a time, and then some change would be indicated which would cause the doctor to alter the prescription he is giving, in order to complete the cure.

Patients, as a rule, do not know what they are taking when the doctor prescribes for them. It is the doctor's opinion, generally, that a patient ought not to know what he is taking. They think that a medicine operates better if the patient does not know, and they prefer to keep the patient in utter ignorance of the remedies they prescribe.

I do not think, however, there is any advantage in keeping a patient in ignorance as to the medicines he is taking. I think he would be better for knowing what he is taking. I believe the peo ought to be treated as if they were intel gent beings. If, for instance, iodide potash can be relied upon to cure certa constitutional diseases, the patient oug to know he is taking iodide of potash. least, he ought to know the name of t mixture, if it be a mixture, so that case it helps him he can not only get for himself, but can assist others in g ting it. When the patient does not kno what he is taking, then in case the me cine helps him he is no wiser than was before. If he should again be a tacked by the same disease, he would obliged to go to the doctor again, for h experience has taught him nothing as remedies.

Another disadvantage is, if the patie is ignorant of the medicine he is takin but the medicine makes him worse, i stead of better, and he finally conclud to change doctors, the second doctor liable to give him the same medicine th first doctor gave him. Of course, th medicine may be slightly different in tast and color, and somewhat different in it effect, but he is very liable to get pra tically the same medicine that the othe doctor gave him. If the first doctor ha told his patient what he was taking, o if the patient had in any way learned th name of the mixture, it would be bette for him, because then he could refuse t take the same medicine after he ha once given it a thorough trial.

It is a pitiful sight to see patients go ing from doctor to doctor for some chroni ailment, changing doctors every now an then, but receiving from each doctor prac tically the same treatment. The patien is in the dark all the time. He did no know what the first doctor gave him. H did not know what the second doctor gav him, and so he may go on until dooms day changing doctors without, in reality changing his treatment.

This would not be so if the patient were allowed to go to the drug store and buy the proprietary medicine, the name o which he knows. For, having bought one bottle and tried it, if it does not help him he can forever afterwards refuse to take the same medicine again, for experience has taught him that it does not help him. The next time he buys a proprietary medi

cine for his ailment he will naturally buy a different one, and in all probability would get a different mixture. The people are made wiser and wiser by their use of proprietary medicines. They try one remedy for rheumatism. If it does not help them they need never purchase that remedy again. They then select some other remedy, that has a reputation for curing rheumatism. If that remedy also fails to help them, they can select the third. Each experience makes them a little wiser as to what remedies will not help them.

The so-called ethical doctors are practically agreed in their opposition to letting the patients know anything about their treatment. To keep the people in the dark as to remedies is considered to be medical ethics. To undertake to instruct the people through pamphlets or printed matter of any sort, to undertake to advertise to the people any remedy, no matter how good, no matter how honest the advertisement may be, is a grave offense against the profession.

The doctors who put up proprietary medicines try to instruct the people. At least, they intend to. Many of them may be unfit to give such instruction, and it is barely possible that some of them intentionally mislead the people, but in the main the doctors who manufacture or prescribe a proprietary medicine try to make their patients more and more intelligent as to the use of medicines. Such doctors furnish their patients with pamphlets and other printed matter, calculated to instruct them as to diseases and remedies for disease. Such doctors have often written, at great expense, medical books for use in the home. These doctors have often rendered great service to humanity by the clear and truthful descriptions they have given of disease, and the simple, home-made remedies for their cure.

The chief controversy between the doctors who make and prescribe proprietary medicines, and the doctors who write prescriptions, is that the first class of doctors believe that the people ought to be instructed in matters of disease and cures, while the second class of doctors believe that the people ought to be kept in ignorance. To keep the people in ignorance is, in brief, what is now known as medical ethics. To enlighten the people is what the ethical doctors call quackery and charlatanry. Any doctor who would write a book or edit a magazine calculated to instruct the people how to cure disease would be considered a quack. He would immediately lose his professional standing, his name would be dropped from medical societies, and he would be considered by the ethical doctors as a disreputable doctor.

There are many ethical doctors who use proprietary medicines. In fact, they are using proprietary medicines more and more every year. There is probably not an ethical doctor who does not, occasionally, prescribe proprietary medicines.

The difference between the proprietary medicines which the doctors prescribe and the proprietary medicines to which the doctors object is simply this, that the proprietary medicines to which the doctors object are so advertised that the people read the advertisements, while the proprietary medicines which the doctors approve of are so advertised that the people do not read the advertisements, and often the advertisements are put into such language that the people would not understand them, even if they should read them.

The proprietary medicines which the doctors approve of are advertised chiefly in medical journals. They are also advertised, each manufacturer for himself, by sending circular letters, printed slips, booklets, etc., in great numbers all over the world.

These advertisements are not sent to the people. They are sent to doctors only. To advertise a proprietary medicine to doctors only, to advertise it in the medical journals chiefly, meets the approval of the ethical physician, simply because such advertising does not help to enlighten the people, but serves only to help the physician himself.

The proprietary medicines which the doctors approve of are sold to doctors only, and if the people desire to get one of these proprietary medicines they must first go to the doctor, pay him for prescribing it, and then afterwards go to the druggist and pay him for the medicine.

[illegible] which
[illegible] drug store
[illegible] but not
[illegible] is a subject
[illegible] to legis-

[illegible] objection, on the
[illegible] of a proprietary
[illegible] on each bottle or
[illegible] of the ingredients
[illegible] but I doubt if this would
[illegible] purpose for which it is
[illegible] people who use proprietary
[illegible] nothing about the ingredi-
[illegible] They are interested only in how
[illegible] medicine operates. If it cures them,
[illegible] and they want. The people do not
[illegible] to study pharmacy or *materia medica*. They are seeking a cure, and want only such information as assists them in finding a cure. It would render no assistance of this sort to put the names of the ingredients upon the package that contains the medicine. Such names, if correctly given, would be to the people only a confusing mass of jargon, and would throw no light whatever upon the subject. In the present state of affairs, however, it would be wise for the owners of proprietary medicines to put the whole formula upon the bottle, in addition to simply putting the per cent of ingredients, which the Government, in the pure drugs act, has thought best to regard as harmful.

I do not believe there is much fraud practiced in the manufacture and sale of proprietary medicines. Generally, the manufacturers of patent medicines are wise enough not to attempt any such thing. They have too much money invested in such an enterprise to dare to practice any harmful or glaring fraud. There may be such attempts made, occasionally, but the firms practicing them very quickly go to the wall. The people are quick to see fraud, and will not purchase anything they have tried and found wanting. Advertisements may sell fraudulent products once, but no one will consent to be defrauded the second time. Unless a medicine gives sufficient satisfaction, so that it will be purchased over and over again by the same person, it does not pay to advertise it.

I would have laws against the practice of fraud, and there are already such laws. Plenty of laws. They should be enforced to the letter. Any attempt on the part of a patent medicine manufacturer to defraud the people, any misstatement or overstatement, any pretense or insincerity, should be swiftly and severely punished. But the complaint should come from people who have been defrauded and not from rival professional sources.

I do not advise the use of any medicine but I advise every one to be guided by his own experience. If a man wants to take medicine he should be allowed to do so. If he prefers to employ a doctor every time he is sick, no hindrance should be interposed. If he prefers to make the attempt to inform himself, to select his own medicines, independent of the doctor's advice, he should be allowed to do so. It is a great mistake to attempt any legal regulation of such affairs.

I regard the medical profession as mainly composed of men who are honestly trying to do a square business, and are conscientiously trying to heal diseases and please their customers.

As to whether this is more true of doctors in this country than in other countries, I believe that the average American doctor is more courteous, more disposed to treat his patients as if they were intelligent beings, than the physicians of other countries. The reason for this is that in the past the relation of the doctor and the patient has been allowed to adjust itself without much legal interference. In the countries like Germany, where everything is dictated by law, the physician, as a rule, is insolent to his patients, and treats the average patient as if he were a dog or a goat. This is the legitimate result of medical legislation.

I believe that if medical legislation goes on in the direction it is now started, it will finally produce an unfavorable result upon the profession in this country. This will create a state of affairs in which arrogance and laziness on the part of the physician will be encouraged, and a

spontaneity and growth of the healing arts discouraged.

I would confine all medical legislation to the regulation of fraud. If any more laws are needed to punish fraud they should be passed. But I do not think that any more laws are needed. All that we need is the thorough execution of such laws as we have. Every doctor should be held responsible for his mistakes, regardless of diplomas, regardless of schools of practice. It should be made easy for the people to protect themselves against carelessness and ignorance. But, while this is being done, the people should be left absolutely free to choose their own medicine, to select their own doctors.

The practice of medicine has always been experimental, but by experiment a little knowledge has been gained from time to time, so that the same old experiments need not be tried over and over again. Thus it is a few drugs have been found, by experiment, to produce the action of physic, and are known and can be safely relied upon for that purpose. So with a large number of drugs that operate in different ways. While the discovery of their use was experimental, and the discovery of the use of new ones is still experimental, yet experience has finally provided us with a large number of drugs, the action of which is known. But whether the action of any one of these drugs is beneficial or not still remains, and probably always will remain, largely a conjecture. Whether a physic, or an emetic, or a diuretic, or a hypnotic, ought ever to be used in any case of disease is still a mooted question, many doctors affirming it, and many other doctors of equal authority denying it.

Medicine is not a science, it is an art, and what knowledge the physician possesses is not gained by scientific deductions, but by experiment. No one can tell before trying what any new drug will do. Neither the chemist nor the pharmacist knows any more about the action of an absolutely new drug, or chemical, than a barbarian would know. Its action upon the human system must be determined by actual experiment.

If the practice of medicine were a science, or even partly scientific, these disagreements among doctors of the same school could not occur. What particular medicine shall be used in any case of disease depends largely upon the whim or habits of the doctor himself. The symptoms of disease are attended with great uncertainty, therefore disagreement is inevitable, and entire agreements are an exception rather than the rule.

The rapid decline in the use of drugs and patent medicines, and the war against their use in prominent magazines, is some proof of the statement that the entire system of medicine is, in a great measure, experiment. When a physician decides to change the treatment of a patient, as is often done, it is because his first experiment did not prove effectual, and he has decided to make another experiment. It is not possible for him to ascertain this fact in any other way except by experiment.

[Written for the MEDICAL BRIEF.]

The Study of Epidemic Diseases.

BY JOSEPH D. HARRIGAN, M. D.,
New York City.

It would be difficult, indeed, for the scientific medical man to find a subject more interesting and more absorbing than that of the epidemic diseases.

For ages it has engrossed the attention of the greatest and the humblest of scientific investigators.

Yet, seemingly, today we are no nearer the elucidation of the mysteries of these unwelcome visitors than were the great scientists of a thousand years or two ago. Whether or not the methods employed in investigating them have been faulty it is unnecessary to consider. It is sufficient to know that we have before us, in the study of these diseases, a broad domain for investigation, whose borders have been skirted by many but whose interior realms have been almost unexplored.

To obtain anything like a comprehensive view of epidemic diseases, it is not sufficient to simply study the diseases themselves, although a thorough mastery of them individually is essential. The most important results can only come from a consideration of their various relationships.

This must include a comparison of the diseases with each other, a consideration

of them with regard to their chronological order, and a close investigation of the connection between them and the various meteorological phenomena that appear to be bound up with many of their appearances. Confining our investigations to one disease at a time, and limiting our researches to what the eye-piece of a microscope might disclose, may do for an embryonic investigator, but to obtain a thorough knowledge of them requires that we take, as it were, a bird's-eye view of the whole situation.

There is a considerable difference obtained in results by viewing disease simply through a microscope, or rather the effects of disease, and those accruing from observation of all the circumstances that attend those diseases. As much difference, in fact, as obtains between the narrow, restricted view of a private in the ranks in a great battle, and the sweeping observations made through the commander-in-chief's field glasses. What appears to the limited vision of the former as of the utmost importance, in fact, the only thing worth basing calculations upon, to the latter simply appeals as one incident, of, no doubt, some importance, but still as only one part of the great picture.

So it is with our study of the epidemic diseases. Influenza, studied individually, furnishes in its symptomatology a wonderfully absorbing panorama of protean changes upon which to feast the eye, stirring up our mental activities at the same time not a little.

But nothing is accomplished towards elucidating the etiology of the disease by this method of investigation. We might just as well study for ages one star in the firmament. If its relationship with the others and consequently, the various influences affecting it, as likewise the results obtained by comparisons made between it and the other stars, are not carefully calculated upon, our conclusions will be far from being scientifically accurate.

The study of influenza by itself is very fine, but the study of it in connection with other of the epidemic diseases gives not only interesting, but even startling results. Compare it with cholera, for example, or typhus fever, or various other of this class of diseases. If I should say that it was a part of these diseases, in fact, the foundation upon which are constructed, it would seem strange, no doubt, to some, and even sibly be looked upon as being an ab statement, but it is nevertheless t Place them side by side and compare t symptoms. Nine-tenths of them are i tically the same—exactly coincide. same chronological order may not alw be observed in this comparison, neither is it always adhered to in symptoms of one case of a disease compared with other cases of the s disease.

The study of influenza by itself is v interesting, but when we compare it w other diseases and find it dominat them to the extent of nine-tenths of th symptomatic phenomena, it takes v definite shape as offering a clear, unm takable guide to the solution of th mysteries.

Taking a broad, bird's-eye view of field of epidemic diseases, it is impossi to avoid the conclusion, judging from intimate associations that they have w each other, and the absolute identity certain symptoms that are common them all, that they start from one comm center, and that, proceeding from t center, which, to all intents and purpo can be considered the simplest form which epidemic disease manifests its it passes through all gradations of cha down to the most complex forms of ease.

Naturally, when we compare th diseases together and find the princi symptoms of one disease running throu many of the others, if, in fact, not all behooves us to consider with extrem great care that one disease with a v to discover what relationship there m be existing between it and the others.

By a process of elimination, stripp the various epidemic diseases of th distinguishing marks in the shape symptoms that individualize one from other, we arrive at the bed-rock foun tion symptoms that seem common to th all, and these symptoms constitute disease known to us as influenza.

Now, realizing the fact that we compelled in this process of eliminat to progress through most complex fo

of disease before we arrive at these foundation symptoms, we are privileged to infer that having arrived there we have come to the simplest form under which epidemic disease manifests itself.

Proof that in influenza is to be found this simplest form of epidemic disease is furnished by a careful study of it in all of its phases. A mere superficial study of it is worse than useless. One had better leave the subject entirely alone if not prepared to thoroughly master it. Then, having mastered it, it is necessary to compare the disease with the other epidemic diseases, one by one, with the result that it will be found to furnish the key to a thorough knowledge of their etiology, a complete insight into their pathology, and naturally be of immense value to us from a therapeutic standpoint.

In the first place, influenza is essentially a disease of the mucous membranes.

Now, here we have a *constitutional* disease showing its effects upon the mucous membranes, alone, as a general rule, as acknowledged by all authorities upon the subject, notwithstanding the fact that the poisonous material causing it permeates the entire body.

But it is not confined to the mucous membranes, as is well known to any one having a wide experience with the disease, although this is its usual custom of localization in the simplest forms.

Now, it can readily be seen that if the amount of poisonous material absorbed is very slight, the effects will correspond and we will naturally have only perhaps a slight coryza, a little cephalalgia, etc. But if the amount be great the symptoms will take on more or less complex developments. Thus, the mucous membrane of the stomach and intestines becomes involved, the bronchial mucous membrane, as likewise the air cells, become affected, and so on through the different tissues and structures of the body, with consequent impairment of function of the different organs.

Upon the *amount* of material of a poisonous nature absorbed, as likewise the *degree of concentration* of that material in the system, will depend the simplicity or the complexity of the disturbances developed, and consequently, also, the simple or complex nature of the symptoms.

It can, in fact, run the gamut from the simplest of affections to the deadliest, just as syphilis can exhibit every shade of development, from a simple roseola to necrosis of bones.

Just here we come to a most interesting state of affairs. Instead of calling these complex disturbances that arise from time to time in the course of influenza as developments of the disease-process itself, they have been hitherto called "complications," an entirely misleading term.

The writer has referred from time to time in various papers to the indiscriminate use of this term. We might just as well speak of a syphilitic iritis as a "complication" of syphilis, a tubercular meningitis as a "complication" of tuberculosis, a scrofulous periostitis as a "complication" of scrofula, etc., etc.

The trouble and confusion arising from this misuse of the word in influenza, cholera, typhus, etc., is inconceivably great, and not only obscures from us a clear view of the essentials of disease, but also clearly indicates that the writers failed to recognize sufficiently fully the constitutional nature of these diseases. It should be sufficiently easy to understand that wherever the blood circulates, surcharged as it must be with the disease-producing material, anywhere in the economy, or, in fact, for that matter, everywhere, certain developments of disease must be anticipated.

Naturally, these metamorphoses must be expected at times to be very great. The whole aspect of the disease may be changed. Any part of the body being apt to become affected, it is certainly clear that, instead of regarding the localizations as "complications," we must regard them as part and parcel of the disease, no matter in what extremely severe form they make their appearances.

The disease, in its mildest forms, in other words, where it is only *skin deep*, as it were, meaning by this the cases wherein the mucous membranes alone are affected, can be looked upon with perfect justification, I think, as the "initial lesion" of the great epidemic diseases.

Where the disease goes deeper than the mucous membranes, involving the struc-

tures of different organs, as likewise becoming more diffused throughout the organism and consequently more severe and deadly, we can but regard these manifestations as secondary, tertiary, quaternary, quinternary, etc., forms of the disease, and *not as new diseases.*

Simply because one or two symptoms in some epidemics are of especially great prominence, and the pathological conditions underlying these symptoms are of especially pronounced and serious character, do not justify us in ignoring the fact that the vast majority of symptoms in the case are identically the same, nor blind us to the fact that these symptoms form the basic groundwork and foundation upon which all the epidemic diseases are constructed. Splitting hairs over the color of a few spots, or over the different waves of temperature, or over other details in the symptoms, easily recognizable to be in an absolute minority and completely ignoring the extraordinarily important fact that the vast majority of symptoms coincide, appear to me entirely unscientific methods of procedure. If we were to apply the same method of investigation to the widely-divergent manifestations of syphilis, we would have a score of diseases to mystify us instead of one. The "complications" which mark the different forms under which syphilis manifests itself are so numerous that it is only by a system of comparison, a putting of this and that together, that we are able to make a positive diagnosis in thousands of cases.

Now, applying the same method of investigation to the great constitutional diseases that go by the name of epidemic diseases, we readily find that the simplest form of them is found under the group of symptoms that characterize influenza. Should any one consider this doubtful let him parallel the various symptoms common to the different epidemic diseases. He will find nine-tenths of them identical with the symptoms that go to make up the disease known as influenza. Not always, as stated before, in the same chronological order. This would be too much to expect. In this it would not differ from the other constitutional diseases that are not known as epidemic diseases.

For instance, tuberculosis of bone is sometimes the first manifestation we have of the presence of tuberculosis. Inste of commencing at its simplest form takes on its gravest and most compl changes from the very beginning. T same might be said of syphilis, scrofu scorbutus, etc. If this is true of the *n epidemic* constitutional diseases, it shou also hold true of the *epidemic* consti tional diseases.

We should expect to find in this ca the severest symptoms exhibited first many epidemics, the chronological ord of procedure being entirely reversed, a patients carried off by thousands fro the fierceness of the attack, without ha ing had the opportunity of going throu the primary or milder forms of the d ease.

In a recent paper (MEDICAL BRIEF, Ja uary, 1907, page 66) I quoted from Pro Lebert, showing that where patients r cover from the fierce onslaught of a attack of cholera they pass through wh is known as the stage of reaction, which stage the symptoms are *identic* with the symptoms of influenza!

When we recall the fact that a profu diarrhea is one of the commonest wa in which an attack of influenza is term nated, and bearing in mind the severit at times, of the gastric and intestina symptoms in many of the epidemics o influenza, it seems impossible to escap the conclusion that upon the degree o potency of the poisonous material ab sorbed by the system, as well as th amount of it exhibited, will depen whether the disease takes on a primar or simple form from the beginning an be comparatively slight, or, on the othe hand, brushing aside the formalities o an attack in the usual order, makes it appearance in a secondary, tertiary quaternary, quinternary, etc., form, th severity of the case and its degree o complexity depending upon the organ involved, etc.

Naturally, and properly, our medica nomenclature must expand according a the various developments of epidemic dis ease occur, but to label every combinatio as it arises with a cognomen that would lead one to think he was dealing with an entirely new disease, simply obscures our perception of the essentials of disease,

and naturally leads us far from the right path in our investigations.

The idea of isolating each group of symptoms, each new combination of pathological happenings as they develop, and losing sight of the fact that nine-tenths of the phenomena making up these different combinations are almost exactly identical, and then placing these isolated groups in separated niches, like so many sculptured statues, labeling them, *e. g.*, red fever, green fever, blue fever, yellow fever, etc., is about as absurd as it is unscientific.

Confining our investigations to the different diseases separately, without comparing them together, and paralleling the symptoms that are common to them all, is an extremely unsatisfactory method of procedure, and leads to no definite scientific elucidation of the mysteries of the epidemic diseases.

On the other hand, taking a broad-minded view of the whole subject, putting this and that together, as one of our great detective sleuths in an important case laid before him would do, leaving not the slightest shred of evidence uninvestigated, we would, by comparing one disease with the others, etc., taking also into account the known facts with regard to them as handed down to us from medieval and ancient philosophers, and not ignoring these facts, as is done at the present time, we would be surprised and gratified at the results.

Some of these facts have to do with meteorological phenomena, that have from time immemorial been so closely interwoven with the epidemic diseases that a study of these diseases without a study of their connection with these phenomena amounts to the same as a study of "Hamlet" with that gentleman left out.

The absurdity of ignoring these phenomena ought to be patent to all, when we reflect that the very periodicity of our epidemics is proof positive of the connection of them with the earth's course through space, and with the chemical and electro-chemical activities encountered.

The every-day medical man may think that, in discussing the causes of disease, we can readily dispense with meteorological phenomena; in fact, leave this phase of the subject resting quietly in the graves of the ancients, together with their superstitious views concerning the influence exerted by the planets, etc., upon the earth, causing plagues, famines, etc. But if he could reflect for an instant upon the fact that the human body is a complex chemical substance, with chemical and electro-chemical activities in operation constantly, these activities continued in their functions by extrinsic chemical substances, such as the food we eat, the water we drink, etc., and then consider that these so-called meteorological phenomena are nothing more nor less than chemical and electro-chemical operations in progress, with the human body as one of the objective points of attack in the universal process of disintegration transpiring, he ought certainly to see that it is absolutely imperative upon us to study carefully these phenomena, *i. e.*, these chemical and electro-chemical activities, with a view to determine, if possible, whether or not our epidemic diseases are not directly traceable to them.

The periodicity of our epidemics, the known coincidental occurrences of meteorological activities with these diseases, the fact that the body is a complex chemical substance, and incapable, according to all acknowledged chemical laws, of escape from surrounding chemical, etc., environments, makes it impossible to avoid the conclusion that one of the main factors, if, indeed, not the principal one, in producing these diseases, is to be found in these meteorological so-called phenomena, which are nothing more nor less than purely chemical processes.

The greatest enlightenment upon the subject of epidemic diseases can only come by studying them, not only individually but collectively, comparing one with another; then, taking into account the varying conditions of climate encountered throughout the different latitudes, calculate carefully the changes that must ensue in these affections, according as the nature of the exhalations of soil, flora, etc., pertaining to the different localities varies; and, finally, not content with restricting our observations to the earth alone, it is of the highest importance to consider the extra-terrestrial chemical and electro-chemical activities that form indisputably

the connecting link with the periodic returns of these diseases, this periodicity being due unmistakably to the career of the earth through space. Else to what is this periodicity, more or less irregular though it be, due? Is it to be quietly ignored simply because the problem of solving it is too difficult?

A broader-minded consideration of the whole subject of epidemic disease than that furnished by the eye-piece of the microscope is absolutely essential to solving this problem of periodicity, as well as the various other problems that have hitherto baffled ancient and modern investigators.

668 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

Headaches—Cause, Relief, Cure—A Few Suggestions.

BY E. W. CAPEN, M. D.,
Monson, Mass.

No enforcement of pure food laws is necessary to convince the careful observer that to have as our only armament against the various headaches a tablet of some coal-tar sedative, is a very poor recourse, and bound to become more and more unsatisfactory as time goes on. No headaches from mere perversity, though it may be granted if you wish that perversity has made many a headache. From this, then, you infer that once the cause is ascertained the effect may be made to cease. One kind of headache comes in one place on the head; another cause produces an entirely different "achy" spot. Among the more prominent causes of headache may be mentioned anemia, hyperemia, reflex causes, rheumatism, toxic and catarrhal.

Anemia is a very frequent cause of headache, and quite commonly affects girls at puberty. Depression and lowness of spirits with periods of extreme timidity characterize the state, and usually there is pallor, and sometimes palpitation. The location of the pain is variable, being sometimes in the vertex and sometimes in the forehead and temples; more rarely the occiput. The pain is of a dull, gnawing kind, and more constant than severe. Dizziness and fainting are not u common.

Relief and cure depend on the resto tion to normal of a depleted blood. Su shine, fresh air, good, nourishing, abu dant and easily digested food, and, if pos ble, a change of environment, beside t medicinal treatment, will speed and mak permanent the cure. Iron, manganes arsenic, quinine or strychnine may called for medicinally, and in chlorot girls the addition of pulsatilla is of ine timable benefit. Blaud's pills have yet t be bettered as a method of administerin iron.

Hyperemic headache may be due to e cessive mental application. The bloo vessels are engorged, ideas flow wit great profusion, or there is a torpor, d pending whether the engorgement is art rial or venous. There may be illusion and the face is flushed, the carotids pul sate violently, the eyes are suffused, an the whole picture is one of extreme con gestion. Pain, sometimes intense. Rest light diet; very small allowance of meat and that not red; no alcoholics; frequen bathing and a liberal allowance of physi cal labor counteract this condition. Bella donna is the drug most often indicated A course of salines is good accessory treatment.

Reflex headache may tax the utmost ingenuity of the physician. First, to locate the cause and then to correctly treat it. A wonderfully complicated nervous system may add to the efficiency and variety of human accomplishment, but that it also adds to the difficulty of locating the seat of many an ailment is the daily experience of thousands of astute physicians. Bilious headaches, uterine headaches, indigestion headaches, headache from eye-strain, headache from any one of manifold other causes, dependent for inception on some impressionistic condition of the nervous system coupled with a more or less acutely deranged organ, serve to emphasize the fact that what might be a very simple thing often is a very complex one.

Headaches referable to stomach and sexual organs are likely to appear at the base of the skull; also those due to rheumatism, at times. The sides of the head ache from troubles in the small intestine;

the forehead from large intestine or loaded colon or rectum; below or under the superciliary ridges from catarrhal conditions; the vertex from uterine or vesical complications; the occiput from muscular eye-strain. Neurasthenic headache may appear at any place, and neuralgic also, and any two may be combined and present a picture that is far from easily interpreted. If a headache seems to refer to a particular organ, assure yourself that this organ is really the offender by finding its deranged function before treating it. So, and only so, can proper treatment be instituted.

For digestive headaches a good active cathartic, then a bitter tonic, as strychnia, or the crude nux vomica, with pepsin, and, perhaps, pancreatin for temporary relief. For bilious or sick headaches, a good liver stimulant, as chionanthus, sanguinaria, chelidonium, or even calomel, coupled with a regular laxative as the compound aloin pill.

For eye-strain, rest and glasses.

For uterine, proper local treatment and helonias, pulsatilla, aletris, actea racemosa, or other special drug.

For catarrhal conditions, antiseptic sprays and a mucous membrane tonic. internally, as hydrastis or the iodide of arsenic in one one-hundredth grain doses.

For bladder troubles, hexamethylene, tetramine, and plenty of water.

For all, careful diet, free exercise, fresh air and rest.

Rheumatic headache affects chiefly the scalp, and has a heavy, continuous pain, with tenderness. It is worse toward evening and before a storm.

Treated by general rheumatic remedies, a vegetable diet; no liquors; full indulgence in water, especially lithia water, milk, and keeping the feet dry and warm. Rhus toxicodendron, bryonia, sodium salicylate, colchicine, iodide of potash and numerous other drugs recommended show that there is no specific.

Toxic headaches are from absorption or non-excretion. Alcoholic, narcotic, uremic or malarial are the common forms of the poison. Free catharsis for the first two, with apomorphia for the first and strychnia for the second will be found very useful. Malarial should be treated with quinine. Uremic by lessening the ingestion of meat; lessening exercise; increasing perspiration, free catharsis and diuresis.

With catarrhal conditions in addition to previously mentioned treatment, all foreign growths as adenoids, spurs, and the like, should be removed; a dry climate may be sought; good elimination should be obtained, and care taken to prevent wet feet and exposure to draug..

Nothing is so common to the physician as headaches; few things so annoying, and for the increasing one's clientele of grateful patients nothing so potent as the cure of headache.

A Just Appeal.

DEAR SIR—I have for many years been a subscriber to your helpful and progressive medical journal. I now appeal to you on behalf of myself and family, who have been rendered shelterless and penniless in consequence of the terrible earthquake here on the fourteenth of January, causing the loss of fully one thousand lives. As all my savings were invested in house properties, and these are all demolished, I am now financially ruined, after many years of hard toil. I earnestly request you to do your very best to obtain such assistance from the members of the BRIEF family, and from any other kind and generous persons to enable me to rebuild my home, and may Almighty God, the great Architect Divine, the more abundantly bless each donor, and preserve them from a like calamity.

Sincerely,

C. H. BARRINGTON ARMSTRONG, M. D.

[All members of the profession who desire to help the doctor can address him at 38 East street, Kingston, Jamaica.—ED.]

Consolidation of Medical Journals.

We are pleased to note the fact that the old and well-known *Medical Mirror*, which was conducted by the lamented Dr. I. N. Love, has been consolidated with the *Medical Era*, and will be known in the future as the *Medical Era*. We wish the *Era* success in its acquired efforts.

Examination Questions and Answers Maryland Examining Board, June 20-23, 1906.

ANATOMY.

1. Describe the upper extremity of the femur.

ANSWER.—It comprises a head, neck, greater trochanter, and lesser trochanter. The head, directed upward, inward, and forward, is hemispherical and coated with cartilage. It articulates with the acetabulum, and presents a small fossa at about the center of the articular surface for the ligamentum teres. The neck is a strong bar serving to join the head to the shaft at an angle of approximately 125 degrees. Its vertical diameter is greater than its thickness, and it is widest where it joins the shaft. Its junction with the shaft is marked anteriorly by a ridge which terminates above in the tubercle. Posteriorly the intertrochanteric ridge crosses the widest part of the neck. In front of the upper part of this line is the digital fossa. The trochanter major is a large cuboid process surmounting the shaft so as to overhang the digital fossa. Its outer surface is rounded and presents an oblique line passing from the upper back angle to the lower front angle. This process presents also an oblong anterior surface, a superior border, and a posterior border; the latter being the upper part of the intertrochanteric ridge. The trochanter minor is a prominent process situated at the back of the shaft about two and a half inches below the greater trochanter.

2. Describe briefly the elbow joint.

ANSWER.—The elbow joint is a typical hinge joint. The bony formation of the joint consists in the trochlea, of the humerus lying in the grasp of the sigmoid cavity of the ulna, together with the capitellum of the humerus resting in the cup on the head of the radius. The ligaments, as a whole, form a capsule, enveloping the joint, but studied separately they are: (1) The anterior ligament, lying in front and attached mainly above to the margin of the coronoid fossa and below to the margins of the coronoid process and orbicular ligament. (2) The posterior ligament is thin, passing from the upper margin of the olecranon fossa downward to the olecranon. (3) The internal lateral ligament, fan-shaped, is attached by its upper narrow end to the internal condyle and by its lower broad end to the inner edge of the sigmoid cavity. (4) The external lateral ligament passes from the external condyle above downward to the orbicular ligament below. The synovial membrane lines the inside of the capsule and is reflected onto the articular surfaces. A pad of fat occupies the coronoid fossa and the olecranum fossa.

3. Name the accessory sinuses of the nose.

ANSWER.—(1) Maxillary, (2) Frontal, (3) Sphenoidal, (4) Ethmoidal, (5) Palatal.

4. Describe the collateral circulation after a ligation of the internal iliac artery.

ANSWER.—"By the anastomoses of the uterine and ovarian arteries (in the female); of the opposite vesical arteries; of the hemorrhoidal branches of the internal iliac with those from the inferior mesenteric; of the obtura artery; by means of its pubic branch, with the vessel of the opposite side and with the epigastric and internal circumflex; of the circumflex and perforating branches of the profunda femoris with the sciatic; of the gluteal with the posterior branches of the sacral arteries; of the ilio-lumbar with the last lumbar; of the lateral sacral with the middle sacral; and of the circumflex-iliac with the ilio-lumbar and gluteal."—Gray.

5. Name and give location of the salivary glands and state just where their ducts empty.

ANSWER.—The parotid glands are situated just behind the rami of the lower jaw, and their ducts (Stenson's) empty into the mouth opposite the second upper molar teeth. The sub-maxillary glands lie in the sub-maxillary triangles under cover of the angles of the jaw, and their ducts (Wharton's) open into the floor of the mouth on each side of the frenum of the tongue. The sub-lingual glands lie on the inner surface of the mandible just above the milohyod ridges, and their ducts, several in number (ducts of Rivinus), open through the mucous membrane covering the glands.

6. Describe the portal system of veins.

ANSWER.—"The portal vein conveys blood from the stomach, from the whole of the intestine, except the terminal portion of the rectum, and from the spleen and pancreas to the liver. Unlike other veins, it ends like an artery by breaking up into branches, which ultimately terminate in capillaries in the substance of the liver; from these portal capillaries the hepatic veins, which also receive the blood conveyed to the liver by the hepatic artery, arise; and as these open into the inferior vena cava, the portal blood ultimately reaches the general systemic circulation."—Cunningham.

OBSTETRICS AND GYNECOLOGY.

1. Describe the preliminary arrangements and preparation for an approaching accouchement.

ANSWER.—Clean, well heated, lighted, and ventilated room free from all dust, superfluous furniture and hangings, with a narrow bed or cot for confinement prepared with rubber sheet and draw sheet. Two pitchers for hot and cold sterile water with three basins for washing and holding solutions should be present, also douche pan, three dozen sterile pads, three binders for mother and clothes for baby. At beginning of labor patient should have general bath, especial care being given the genitals, and an enema. On near approach of delivery put to bed on Kelley pad or extra rubber sheet, wash genital region with soap water and antiseptics and clip hair. Cover surrounding regions with sterile towels.

2. What is your treatment for a case of placenta previa about the eighth month of pregnancy?

ANSWER.—If no hemorrhage is present and patient accessible, await onset of labor. Where there is hemorrhage or labor has begun, dilate and apply forceps or do a podalic version and bring down thighs as a plug, according to indications of individual case. If neither of these

can be done vagina may be tightly filled with gauze and allow presenting part to push it out.

3. Give diagnosis of a pregnancy at the third month.

ANSWER.—At this period absolute diagnosis is difficult or impossible. Symptoms are cessation of menstruation, nausea and vomiting, tingling in breasts, symptoms of pressure on bladder and rectum, nervous disturbances. Physical signs are softening and increase in size of cervix lower uterine segment and whole uterus which is fig shape and at top of symphisis; increased pigment in face, breasts, abdomen and vagina, increased vaginal secretion and size of breasts. From cancer or other tumor by history, consistency of uterus, lack of menstruation.

4. Describe the mechanism of a podalic version and mention the points of danger to the fetus.

ANSWER.—Pass the hand corresponding to the child's face into the uterus and grasp one or both feet, usually the anterior. Pull down on it and at the same time push the buttocks from opposite side or the head upward with the free hand. Child may receive some injury, like fracture, from hand in utero, may be asphyxiated by pressure on cord in delivering after coming head, or have neck or other bones fractured in so doing.

5. Describe a complete abdominal hysterectomy.

ANSWER.—After sterilizing hands, instruments and abdomen and anesthetizing patient, open abdomen in median line just above pubis by incising down to peritoneum and then raising and cutting peritoneum so as to avoid intestines. Ligate the ovarian arteries and place clamp on proximal sides of ligatures, cut between them, going down through broad ligaments nearly to uterine arteries. Incise peritoneum on anterior surface above bladder and push bladder off with gauze, ligate uterine arteries ¼ to ½ inch from cervix so as to avoid ureters, carry broad ligament incision to vault of vagina proximal to ligatures. Cut around vaginal vault at junction with uterus and remove; stitch edges of vagina together or leave partly open if drainage is indicated. Stitch together edges of broad ligaments and peritoneum from bladder and pouch of Douglas. Mop peritoneum free from blood. Close wound with layer sutures, leaving in normal saline sutures.

6. Describe some conditions of the uterus which may be relieved by an amputation of the cervix.

ANSWER.—Conditions of the cervix most helped by an amputation are great hypertrophy and elongation, especially where stenosed, and a much lacerated one full of cicatricial tissue and much congested or where cysts or chronic infection exist confined to cervix. Operation not sufficiently radical for malignancy.

PRACTICE.

1. Define: (a) Tachycardia, (b) Leukemia, (c) Cretinism, (d) Hydrothorax, (e) Ascaris Lumbricoides.

ANSWER.—(a) Tachycardia (pulsus frequens) is an increased frequency in pulse rate, and may be constant or paroxysmal, physiologic or pathologic. (b) Leukemia is a disease characterized by a marked increase in the number of leukocytes in the blood, together with the enlargement and proliferation of the lymphoid tissue of the spleen, lymphatic glands and bone matter. Anemia, internal hemorrhage and increasing exhaustion are constant symptoms. (c) Cretinism is a congenital condition associated with absence or disease of the thyroid gland, and characterized by premature ossification of bones with deformity of head and face, stunted growth, mental dullness or idiocy. (d) Hydrothorax is an effusion of fluid in the pleural cavities. (e) Ascaris Lumbricoides is a common intestinal parasite inhabiting the small intestines and is generally known as the round worm.

2. Name symptoms of: (a) Ulcer of the Stomach, (b) Acute Nephritis, (c) Scarlatina.

ANSWER.—In ulcer of the stomach there are various manifestations of indigestion. Paroxysmal pain localized in the pit of the stomach, or radiating from this point to limbs and back; aggravated by the taking of food, especially very hot, cold or spicy articles. Gnawing pain may be present between attacks of gastralgia. Localized tenderness (Boas's point) is very constant, and is elicited, usually, from one to two inches above pylorus. Vomiting is common, and if immediate, indicates ulcer near cardiac orifice. Pyloric ulcer gives rise to vomiting about one hour later. The vomitus contains undigested food and mucus, and is hyper-acid. In hematemesis, which occurs in about forty per cent of cases, the vomitus contains bright red blood or clots. The passage into intestines shows as dark stools. Enlargement in region of pylorus is infrequently demonstrated. Analysis of stomach contents shows increase in hydrochloric acid. Anorexia, anemia, loss of weight and strength are invariably present. (b) Acute Nephritis. The onset is rarely by a chill, but usually sudden, and characterized by dyspnea, sometimes by nausea and persistent vomiting. Fever is variable, ordinarily moderate. A full and tense pulse. Dull pain is experienced over kidneys, posteriorly, rarely referred along ureters. The desire to urinate is frequent, and the skin is harsh and dry. Dropsy appears early, and is first noticed in face and eyelids, ranging from a puffiness to general anasarca. Uremic symptoms may be added at any time; anemia and weakness develops early. Urinary symptoms are most characteristic. The urine is scanty, smoky, and of high specific gravity. Albumen is present in large quantities. The urea excreted is greatly lessened, as are also the phosphates and chlorides. Microscopically is found hyaline, blood, granular and epithelial casts. Uric acid, urates and oxyalate crystals. Blood corpuscles and epithelium. (c) (Ordinary type) Period of incubation varies; usually about four days. Begins abruptly, as a rule, rarely by a chill. Commonly vomiting, with convulsions in young. Fever rises rapidly, reaching 104° F. or 105° F. first day. Pulse range unduly rapid, one

hundred and ten to one hundred and fifty. Pain in the throat and difficult swallowing. Bright scarlet rash appears at the end of twenty-four hours, visible first on neck and chest, spreads over body in course of several hours. The rash is uniform, not elevated, and disappears on pressure and there is no intervening healthy skin. Average duration of rash is from three to four days, and slowly disappears. Strawberry tongue is characteristic. Nervous symptoms mitigate or disappear when rash is established, and the temperature declines by lysis, reaching normal about the seventh day. Desquamation as scales and flakes begins at this period, and is rarely complete before the fifth week. Scanty albuminous urine is not uncommon. Intestinal symptoms not prominent.

3. What means would you employ in the diagnosis of diseases of the lungs, stomach, and kidneys?

ANSWER.—In diagnosing conditions of each, obtain a comprehensive history of the patient, including the family, his past and present. And in diseases of the lungs, employ inspection, palpation, percussion, auscultation, mensuration and succussion. If obtainable, examine microscopically and macroscopically sputa and exudates. In examinations of the stomach employ inspection, palpation, percussion, auscultation and succussion. Inflate and determine size and position of organ. Administer test meal and examine contents of stomach. Ascertain the motor and absorptive power and examine bacteriologically. In diagnosing kidney disease, employ inspection, palpation, percussion and auscultation. Secure specimen by catheterism of bladder of ureters, if necessary, and examine. Determine twenty-four hours quantity, color, odor, consistency, specific gravity, reaction, total urinary solids; examine for albumen, sugar, blood, bile-pigment (sudican), acetone, diascetic acid, oxybutyric acid, fat and pus. Microscopically for cast, organisms, etc.; also verify certain substances found macroscopically and chemically.

4. Name some of the sequels of typhoid fever. Name some causes of intestinal obstruction.

ANSWER.—The sequelæ of typhoid fever are manifold, as, persistent diarrhea, lobar pneumonia, bronchitis, pleuritis, ulceration of larynx and laryngeal paralysis, endo and pericarditis, thrombosis of veins, gangrene of foot and legs, pharyngitis, suppurative prostitis, cholecystitis, gall stones, neuritis, post typhoid insanity, paralysis, arthritis, nephritis, conjunctivitis, otitis, decubitis, bone necrosis and various skin lesions. Briefly stated, the causes of intestinal obstruction are strangulation, intussusception, volvulus, fecal impaction, enteroliths, gall stones, tumors, strictures, intestinal paralysis and abnormal contents.

5. Give treatment of diabetes mellitus and of laryngeal diphtheria.

ANSWER.—Interdict or reduce to minimum the starches and sugars. Allow non-carbohydrates. Use saccharin or glycerine in lieu of sugar when latter is demanded. Ventilation, fresh air, daily bathing, appropriate exercise and attention to secretions are essential. Fatigue and exposure avoid. Medicinal treatment is unsatisfactory, as no drugs recommended have a direct curative influence. Opium is a remedy capable of limiting the progress of the disease. It should be given in increasing doses until sugar is reduced to a minimum, and then gradually withdrawn. Next to opium codeine probably deserves the most confidence. Many drugs, such as bromide of arsenic, the salicylates, nitroglycerine, potassium iodide, lactic acid, adrenalin. Fair doses of the coal tar products, notably anti-pyrine and the preparations of the pancreas are recommended. Chloral and the bromides are useful adjuncts, and benefit nervous symptoms. The various skin lesions should receive appropriate treatment. Coma is an almost hopeless complication, and requires inhalation of oxygen, hypodermoclysis and interoclysis, alkalies are esteemed as preventives. Stimulate. (b) When the larynx becomes involved in a case of ordinary diphtheria, the following additional measures are advisable. A steam tent may be arranged so that the patient may breathe an atmosphere saturated with moisture. The vapor of slaking lime, and lime water with glycerine is a suitable remedy. If dyspepsia becomes urgent, prompt acting emetics should be administered. When suffocation is threatened from the laryngeal obstruction, intubation or tracheotomy should be immediately performed. Antitoxin should be given heroically. Bold stimulation.

6. Give diagnosis and treatment of tetanus.

ANSWER.—Trauma or wound antedate the onset. Infrequently begins abruptly, commonly by headache and chilliness with stiffness of the neck. Tonic spasm of the masseters (lock-jaw) develops early. Head is drawn back and legs extended, and the body is thrown into general spasm. The arms, however, are little involved. Spasms are excessively painful, and recur spontaneously, and result from external irritants. The muscles remain tonically contracted during intervals. Febrile reaction is variable. *Treatment*—It is imperative that the patient be confined to bed in a quiet, darkened room. Scrupulously prohibit all source of irritation and excitement. Incise and antisepticize the wound. The spasms will require the inhalation of chloroform or nitrite of amyl, and the administration of such drugs as chloral, morphine, codeine, bromide of potash, antipyrine, belladonna, etc. Use antitoxin of tetanus. Maintain nutrition by rectal alimentation, or feed through nose with catheter. Liberal stimulation when advisable.—*State Board Journal of America.*

(To be continued.)

Inclosed find postal order for one dollar for renewal of subscription to your valuable journal, THE MEDICAL BRIEF.—CHAS. T. WAAGE, M. D., Pennsburg, Pa.

Book Notices.

INDICATIONS FOR OPERATIONS IN DISEASES OF THE INTERNAL ORGANS. By Professor Hermann Schlesinger, M. D., Extraordinary Professor of Medicine in the University of Vienna. Authorized English translation by Keith W. Monsarrat, M. B., F. R. C. S. (Edin.), Surgeon to the Northern Hospital, Liverpool. New York: E. B. Treat & Co. Price, $3.00.

When diseases of the internal organs have gone beyond the control of drugs, and operations for relief are necessary, it is well to have a guide along the suggestions as to how best to relieve the conditions. This work has been specially written to aid the general practitioner as to when surgical intervention is proper. This work is based on the views arrived at by private practice of the author in many years' work in hospital and private practice, and has given him the opportunity of acquiring a large experience in the questions which are discussed in this work. There should be some advantage in the circumstance that a physician who is in full sympathy with the standpoint of the surgeon here presents to the practitioner a discussion of the question of surgical intervention. Do not fail to secure this work, as it will do you good.

GENITO-URINARY DISEASES AND SYPHILIS. By Henry H. Morton, M. D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Urinary Surgeon to the Long Island and Kings County Hospitals, and the Polhemus Memorial Clinic. Illustrated. Second edition, revised and enlarged. Philadelphia: F. A. Davis Co., publishers. Price, $4.00.

Genito-urinary surgery is surely on the increase in regard to methods, and any work that shows the spirit of progressive ideas should be recognized. It was found necessary in this volume to make changes in regard to advanced methods, therefore it was found necessary to change some of these in surgical operations, especially in regard to prostatic hypertrophy and a more thorough understanding of its pathological anatomy. The inflammatory affections of the prostate have been also more fully studied, and the knowledge of the surgical diseases of the kidney in regard to both diagnosis and treatment have both been considerably increased. It is a good subject to read, and the author gives good food for a digestion of thought on the things that may arise to the general practitioner. It should be read by the specialist and general practitioner.

OCULAR TEST CHART. By George Mayerle, San Francisco, Cal. The Result of Many Years of Theoretical Study and Practical Experience, of Great Interest to the Medical Profession Throughout the World. San Francisco: George Mayerle, Publisher and Author. Price, Distant Chart, with Cabinet, $6.00; without Cabinet, $3.00; New Reading Test Card, $1.50. For full information see advertisement on our pages.

This chart will increase the physician's income, owing to the fact that so many cases come to the family physician when no specialist is near at hand, and he will find that it eliminates the great danger of mistakes, and convinces the patient as to his professional skill and ability to diagnose, and, at least, correct defective eyesight. We have never seen anything that equalled this chart for the use of the general practitioner. It would be well for all our friends to fully consider this proposition.

A TEXT-BOOK OF CLINICAL DIAGNOSIS. By Laboratory Methods. For the Use of Students, Practitioners and Laboratory Workers. By L. Napoleon Boston, A. M., M. D., Associate in Medicine and Director of the Clinical Laboratories Medico-Chirurgical College, Philadelphia; formerly Bacteriologist at the Philadelphia Hospital and at the Ayer Clinical Laboratory of the Pennsylvania Hospital. Second edition, revised and enlarged, with three hundred and thirty illustrations. Philadelphia and London: W. B. Saunders & Co. Price, cloth, $4.00; sheep, $5.00.

In a clinical diagnosis it is well to be thorough, therefore to examine carefully the sputum, feces, blood, etc., is of great importance, and every physician, to be successful, should have a thorough knowledge of the significance of the chemic and microscopic findings in the laboratory, as this is found to be absolutely necessary in successful therapeusis. This work of Dr. Boston will furnish a complete guide to correct diagnosis along these lines. We find many subjects that are not included in other works along this line. In selecting a work on diagnosis it is profitable to get the best and most complete.

PATHOLOGY, General and Special. A Manual for Students and Practitioners. By John Stenhouse, M. A., B. Sc., Edin., M. B., Tor.; Formerly Demonstrator of Pathology University of Toronto, Toronto, Can.; and John Ferguson, M. A., M. D., Tor., Senior Physician Western Hospital, formerly Senior Demonstrator of Anatomy University of Toronto, Toronto, Can. Series of the Medical Epitomes, edited by Victor Cox Pedersen, A. M., M. D., Lecturer in Surgery at the New York Polyclinic Medical School and Hospital, etc. Illustrated with sixteen engravings and a colored plate. Philadelphia and New York: Lea Brothers & Co. Price, $1.00.

This volume brings near to completion the Medical Epitome Series, which is to comprise twenty-three manuals authoritatively covering the whole field of medical education. Twenty of the above are now ready and three more volumes will be issued shortly, one on Nose and Throat, one on Gynecology, and one on Hygiene. Together, these will make an elegant library.

A TEXT-BOOK OF PHYSIOLOGY, For Medical Students and Physicians. By William H. Howell, Ph. D., M. D., LL. D., Professor of Physiology in the Johns Hopkins University, Baltimore. Illustrated. Philadelphia and London: W. B. Saunders Company. Price, $4.00.

In reading a work of this nature, if it is intended for the student as well as practitioner, one would expect the subject matter and the illustrations to be educating, clear and concise. This work has all the merits that go to make up a thorough correlation on the subject of which it treats. It has features that a teacher might develop with profit and benefit to his class. In this work it may be said that to follow any special subject more in detail some references have been given, and these have been selected usually with the idea of citing those works which may contain a more or less discussion on the subject.

THE OPERATING ROOM AND THE PATIENT. By Russell S. Fowler, M. D., Surgeon to the German Hospital, Brooklyn, N. Y. Fully illustrated. Philadelphia and London: W. B. Saunders Company. Price, $2.00.

This book has special features that are not expressed in any other work that we have had the pleasure of reviewing. It is primarily intended for surgeons, nurses, internes, and all others whose duties are in the operating room. For students it shows explicit directions in the lines of operations in all its perfections, such as instruments needed, position of patient, and all the accessories; then the illustrations are educators. It is a good work for the surgeon, student and hospital assistant.

A TEXT-BOOK ON THE PRACTICE OF GYNECOLOGY. For Practitioners and Students. By William Easterly Ashton, M. D., LL.D., Fellow of the American Gynecological Society; Professor of Gynecology in the Medico-Chirurgical College and Gynecologist to the Medico-Chirurgical Hospital, Philadelphia; formerly Lecturer on Gynecology in the Jefferson Medical College, Philadelphia; one of the founders of the Congrés International de Gynécologie et Obstétrique; member of the American Medical Association, etc. With ten hundred and fifty-seven new line drawings illustrating the Text, by John V. Alteneder. Third edition, revised and enlarged. Philadelphia and London: W. B. Saunders Co. Price, $6.50.

In one year's time this work has secured the distinction of a third revised edition. An author and a publisher can but feel gratified at such evidence of worth—to be seen and read is sufficient to guarantee its sale. There are many works on gynecology and it will be the survival of the best. This work has many features to commend it to both practitioners and students.

ESSENTIALS OF PRESCRIPTION WRITING. By Bernard Fantus, M. D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons of Chicago, the College of Medicine of the University of Illinois; also Professor of Materia Medica and Therapeutics Jenner Medical College of Chicago. Chicago: Chicago Medical Book Co. Price, $1.00.

There are but few colleges that give a systematic training in prescription writing; therefore, works such as the one before us are a necessary adjunct to a collegiate course. Instructions in Latin have been very much simplified and reduced to the lowest possible terms, while the formulas of the present have been rather elongated and complex, and we believe this will lead to confusion, yet a work of this nature may solve the problem and be a benefit to the physician and pharmacist.

SURGERY. Its Principles and Practice. By Various Authors. Edited by William Williams Keen, M. D., LL.D., Professor of the Principles of Surgery and of Clinical Surgery Jefferson Medical College, Philadelphia. Vol. I. Two hundred and sixty-one Text illustrations and seventeen colored plates. Philadelphia and London: W. B. Saunders Company. Price, per volume, cloth, $7.00; half morocco, $8.00.

This work will be completed in five volumes, and have the practical benefits of what sixty-six eminent surgeons know of the practice. Could any work be more complete in the knowledge of surgical facts, when a list of the contributors include such names as Abbe, Adami, Andrews, Armstrong, Bennett, Bevan, Bickham, Binnie, Bland-Sutton, Brewer, Cabot, Carson, Codman, Coley, Coplin, Crile, Cushing, Da Costa, Da Costa, Jr., Dench, Dercum, de Schweinitz, Edsall, Eisendrath, Estes, Finney, Fordyce, Frazier, Freeman, Gerrish, Gibbon, Gottstein, Hekteon, Horwitz, Kocher, Lennander, Lewis, Lovett, MacDonald, Martin, Matas, C. H. Mayo, W. J. Mayo, McCaw, Moynihan, Mumford, Monro, Murphy, Nichols, Ochsner, O'Reilly, Osler, Owen, Ransohoff, Rixey, Roberts, Robson, Rodman, E. A. Smith, Harmon Smith, Spiller, Van Hook, Warbasse, F. C. Wood, Woolsey, Young. When such men lend their aid to a work what comment could we make to further its prestige? We rest here and leave to our readers.

DIET IN HEALTH AND DISEASE. By Julius Friedenwald, M. D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M. D., Clinical Professor of Diseases of Children College of Physicians and Surgeons, Baltimore. Second edition, thoroughly revised and enlarged. Philadelphia and London: W. B. Saunders Co. Price, cloth, $4.00; half morocco, $5.00.

The preface to the present edition will more fully explain the worth of this work, so we quote: "The success of the first edition of this book seemed to indicate that it filled a need of the profession. In this second edition we have made numerous minor changes and additions which we trust will make the book more valuable. We have re-written and enlarged the section upon salts, noted the work of Chittenden, given a more extended account of Prochowinick's diet for pregnancy complicated by contracted pelvis, and have added an account of the diet at water cures, and of Klemperer's work on oxaluria. We have added a revised list of recipes and a new set of dietlists for ready reference at the end of the book." This should appeal to the profession as a work well worth the time and expenditure.

DISEASES OF THE DIGESTIVE SYSTEM. Edited by Frank Billings, M. D., Professor of Medicine University of Chicago, and Professor of Medicine and Dean of Faculty Rush Medical College. An authorized translation from "Die Deutsche Klinik," under the general editorial supervision of Julius L. Salinger, M. D., with forty-five illustrations in the Text. New York and London: D. Appleton & Co. Price, $4.50.

The advances of today have given the practitioner and student a better basis for diagnosis and treatment than they have ever had in the past. To keep up with these advanced ideas they are required to read up on authoritative works to show that while much in the past has been based on theoretical ideas, they have now almost become established facts. The study of metabolism has lifted the veil of mystery from much that was obscure. What is metabolism but the chemical changes occurring in nutritive material taken into an organism by which it is converted into an integral part of the living substance? The volume not only treats of these subjects, but a new study has been opened, or more properly revised, namely, the investigation of the feces. Many things have been added in this volume that is sure to commend it to all its readers.

GENITO-URINARY DISEASES AND SYPHILIS. Including their Surgery and Treatment. By Charles S. Hirsch, M. D., Assistant in the Genito-Urinary Surgical Department Jefferson Medical College Hospital. Illustrated. Philadelphia: P. Blakiston's Son & Co. Price, $1.00.

This is one of Blakiston's Quiz Compends. It will serve to facilitate the student in mastering the important points in the diagnosis and treatment of such complications as come to him in such disorders. It gives medicinal and surgical treatment, and such formula as found efficient in the best practitioners.

DISEASES OF THE STOMACH. A Text-Book for Practitioners and Students. By Max Einhorn, M. D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital; Visiting Physician to the German Hospital. Fourth revised edition. New York: William Wood & Co. Price, $3.50.

It is an opportune time to study up on stomach troubles, owing to the great increase of this bane to the human economy. The views have changed in late years in regard to diagnosis and treatment; therefore, anything that leads to a solution of the best treatment is welcome. So many good things have been printed on the pages of the BRIEF that it would seem strange to read such works and not find the trend of practical original experiences by professors of note incorporated. There is no better author on this subject than Einhorn. Therefore, we endorse this work as the best.

THE PRACTICAL MEDICINE SERIES: Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, Vol. VII. PEDIATRICS—Edited by Isaac A. Abt, M. D., Assistant Professor of Medicine (Pediatrics Department) Rush Medical college. ORTHOPEDIC SURGERY—Edited by John Ridlon, A. M., M. D., Professor of Orthopedic Surgery Northwestern University Medical School. With the collaboration of Gilbert L. Bailey, M. D., Instructor in Orthopedic Surgery, College of Physicians and Surgeons. Chicago: The Year Book Publishers. Price for the Series of Ten Volumes, $10.00. Price of this Volume, $1.25.

This series of year books makes a good acquisition to any library and can be secured complete for ten dollars, but should any specialist wish a separate volume he can secure it on payment of same at price stipulated. This volume is a good one on the diseases of children and orthopedics. If you are not a patron to this series you should be.

HUNDREDTH CENTURY PHILOSOPHY. By Charles Kirkland Wheeler. Boston: Press of James H. West Company. Price, $1.06.

This is a work on new thought, is an evolution, and can only be read by those who wish to leave the childhood ideas and seek advanced thoughts along the lines of an advancement of the race. The ideas expressed are very deep and need an active and cultured mind to grasp them, yet we believe it will result in good to read this work.

A SYLLABUS OF MATERIA MEDICA. Compiled by Warren Coleman, M. D., Professor of Clinical Medicine and Instructor in Materia Medica and Therapeutics in Cornell University Medical College; Assistant Visiting Physician to Bellevue Hospital. Third edition, revised to conform to the eighth decennial revision of the U. S. Pharmacopeia. New York: William Wood & Co. Price, $1.00.

Owing to the requirements of the State Boards it has been made necessary to conform to the plan of giving official preparations in the examinations. This necessitates a radical change from the former editions. The section formerly headed "Preparations" has been abolished, thus curtailing its usefulness to the liberal practitioner. There are many changes as well as some mistakes in this issue.

MODERN MATERIA MEDICA AND THERAPEUTICS. By A. A. Stevens, A. M., M. D., Professor of Therapeutics and Clinical Medicine Woman's Medical College of Pennsylvania; Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal Hospital and to St. Agnes's Hospital; Assistant Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia, etc. Fourth edition, thoroughly revised. In conformity with the eighth revision (1905) of the United States Pharmacopœia. Philadelphia and London: W. B. Saunder & Company. Price, $3.50.

This work was originally printed in 1894, and is now thoroughly revised to date, and in its fourth edition. That there is need for this work is evident by the present edition.

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Editorial.

Imitation Remedies.

No good doctor will use an imitation remedy. The so-called pharmaceutical remedies that have recently been recommended to replace standard ethpharmal proprietaries, are based on simply the smell and taste like originals, and not on merit, but to be cheap to bear large profits.

Better or Worse.

It is fashionable to say one druggist can put up a medicine as good as another. This is an absurdity. You might as well say one man can cook as well as another. We visited a hotel once and ate apple pie one day, and it was execrable. The next day the waiter brought on some apple pie that was simply delicious. We asked the waiter why it was, and he said the old cook was absent the day before, and they had a new man at the business.

Experts.

What is the use of medical expert testimony? If you will notice, the expert always testifies on the side that hires him, and for this reason his testimony is valueless.

Pasteurized Milk.

It has been asserted, probably with truth, that no baby could be raised to manhood on Pasteurized milk only.

No Discovery.

A doctor recently claims to have discovered that a man had a soul, because he weighed the man while dying, and he weighed one ounce less when dead, and this was because the soul had left the body. This is no proof at all. No doubt dead matter weighs less than live matter. A dead cat probably weighs slightly less than a live cat. Recently an editor claimed a man had a soul was self-evident, because man was the only animal that reasoned. But is he? Do not some

animals reason to some extent? The fact is that there is no proof of the existence of the soul. We have to take it purely on faith.

Speaking of faith reminds us of the story of the priest meeting Pat one day. He said: Pat, do you know what faith is? No, your riverence; will you please tell me?

Faith is believing something that you don't know positively about, but have to take somebody's word for it. You see that steamboat coming down the river? Yes, said Pat.

If I were to tell you there was an elephant on that boat and you believed it, that would be faith. Do you think now you know what faith is? Sure I do, and I won't forget it, said Pat. Well, the next time I see you I will ask you what it is.

Meeting Pat a few weeks afterwards, he said: Pat, what is faith?

Why, it's a steamboat with an elephant on it.

Macroscopical and Microscopical.

How often a physician or student sees in his journal the expressions: *Macroscopical* and *microscopical*, and wonders at the difference in the meaning. To the wise the meaning is evident, but to those who can not fathom the difference we wish to state that there is a wide distinction to be made. *Macroscopical* objects are easily discerned without a magnifying glass—seen with the naked eye. While *microscopical* objects need a microscope to discover them—they are minute lesions. In expert evidence the distinction will be evident and have weight.

The Golden Rule.

We are asked what remedy a good doctor should give his patient. There is only one rule, and that is the Golden Rule: Do unto the patient what you would have the patient do unto you if the conditions were reversed; that is, give the patient that remedy which you have found best, whether the remedy be allopathic, homeopathic, eclectic, proprietary or old woman's remedy, without regard to what the other fellow or the druggist may think about it.

It is only the patient that should be taken into consideration, not any set rule.

Thankful.

The business men of this country are thankful that Congress and most of the Legislatures have adjourned. We do not need any new laws. There is a craze among politicians to regulate somebody or somebody's business. They seem to have forgotten that this is a republic, which it will soon cease to be unless this law-making mania stops.

Timely.

The following editorial from the *Oklahoma Medical News-Journal* is good and timely, and speaks for itself:

We have often wondered why it is, that whether a preparation is in the U. S. Pharmacopœia or not makes so much difference as to its therapeutic value with a certain class of physicians. We see articles on this subject in almost every journal; some denouncing, others defending proprietary preparations. Some claiming or insinuating, it is a crime to humanity, an outrage on science, and a confession of ignorance and inability for a physician to prescribe a remedy whose name is copyrighted.

Now, why this wholesale denunciation? We will all admit there are harmful proprietary preparations on the market, but at the same time, every physician and druggist, if he is at all conscientious, must acknowledge that there are worthless and harmful preparations of U. S. P. drugs on the market. I have a very clear remembrance of an instance of this in the practice of a colleague of mine a year ago. He had given some Bismuth Sub-nitrate (or to use the U. S. P. nomenclature, Bismuth Subnitras) from a package he had just received from a drug firm. Result: Three cases of acute arsenic poisoning. But is that any reason why bismuth, or all the other drugs of the Pharmacopœia should be discarded? No; it only means that the preparations of the firm which manufactured (as the package had come direct from a manufacturing chemical house) that pound of bismuth sub-nitrate were not safe to use. On the other hand, if we get a bottle of H_2O_2 in which there is no H_2O_2 (as we very frequently do unless we specify on the prescription the name of the manufacturers

of the product that we want)—wherefore no result—is that any reason for relegating every preparation of hydrogen dioxide to the dump pile? No; it only shows we should dodge the house which places on sale drugs which have lost their strength.

Why is not this same feeling extended to other preparations not in the U. S. P.? It is usually an easy matter for a physician of ordinary intelligence to tell whether he gets the results he expected from a drug or not; and if he gets these results, why should he not be allowed to use it? Is he not to prescribe a drug, preparation, or formula simply because it is not in the Pharmacopœia (and from some of the articles I have lately read, that is one of the reasons)?

Taking this to be the case: On September 1, 1905, some one hundred drugs were added to the United States Pharmacopœia—likewise some one hundred were dropped from it; one hundred new drugs became official, one hundred which had been official became unofficial.

On August 31, 1905, at 11:59 P. M., I (according to some of those I have mentioned before) would not have been justified in prescribing any one of the one hundred or more preparations added to the Eighth Revised Edition of the U. S. Pharmacopœia. Yet, one minute later, if I had prescribed them under their proper chemical name, I would not necessarily have been classed as an ignoramus. Also the same thing must occur in regard to the drugs omitted from the Pharmacopœia: I must conscientiously say that they are good therapeutic agents before September 1, 1905, but at twelve, midnight, August 31st, I must have my mind so trained that it can conscientiously and honestly say: "They are absolutely worthless, and it is a sin and a crime to use a single one of them."

As I said at first—I wonder why?

It seems to me too much on the order of the "Lady-Bather," whose life had just been saved by a stranger, who, after he had succeeded in getting her safely to land, and she recovered the use of her lungs and tongue, turned to her rescuer and said: "Sir, how dare you—did you not know I had not been introduced to you?"

[Written for the MEDICAL BRIEF.]

Prolapse of the Rectum in Children.

BY GRANVILLE S. HANES, M. D.,
Clinical Professor of Diseases of the Rectum, Kentucky School of Medicine.
Louisville, Ky.

Believing, as I do, that the number of cases of prolapse found in adult life could be materially decreased by proper treatment of such cases in childhood, is the apology I offer for presenting this brief paper. In my own acquaintances I know not less than half a dozen men who have had this condition since childhood, and if proper care and treatment had been practised there is small doubt that all of them would be well to-day in this respect.

This subject is of no little importance when we consider prolapse occurs far more frequently in childhood than at any other time of life—cases neglected and not treated occurring in adult life. Parents alone are not responsible for this neglect in the treatment of children. The physician should take the greatest possible interest in all these cases and show parents how grave such conditions are, and how amenable the average one is to treatment.

Etiology.—The most important etiological factors producing this condition are diarrhea, constipation, phimosis, foreign bodies in the rectum, pertussis, pin worms, polyps, the pernicious habit of allowing the child to remain on the vessel and straining for a long period of time, whooping cough, and anything that will cause undue and prolonged straining. A partial absence of the normal sacral curve is given by many or all authors as a predisposing cause. This I very much doubt. In lieu of this I would suggest that the imperfectly-developed sphincter muscle in childhood is a greater predisposing cause.

Pathology.—There is but little pathology in prolapse in these cases, since it is seldom more than the mucous membrane that appears; the loose, fibrous and elastic tissue upon which the mucous membrane rests, allows a certain amount of protrusion of mucous membrane in expelling the fecal material, and when the act is completed it retracts, and the mu-

cous membrane is replaced in its normal position. If, for any reason, disease or otherwise, these fibers are weakened and lose their elasticity, the protruding mucous membrane is not replaced in the normal way, and, on the contrary, the protrusion grows larger each time the prolapse occurs. In children, the prolapse is usually easily returned. There is not much in the appearance of the mucous membrane, except that there may be a slight redness, and in the cases most difficult to replace, the mass remaining down an unusually long time, the sphincter muscle becomes relaxed, loses its tone, and, in severe cases, becomes paralyzed. Under these conditions the mucous membrane becomes thickened, reddened and ulcerated; as a result of this there may be slight hemorrhages, discharge of pus and mucus, and pain when the bowels act.

Symptoms.—The prolapse is usually from one to two inches in length, and consists of mucous membrane which normally occupies the lowest portion of the rectum. The mucous membrane shows more or less distinct crescentic folds; when the tumor begins to form, the mucous membrane presents the natural color and returns spontaneously; if, however, the prolapse has occurred a great many times and the tumor has gradually grown larger, and is replaced, it then becomes heavy, congested and has a livid appearance. In such cases there are bleeding ulcerations and pain on defecation.

Treatment.—The treatment, I believe, in the main, should be along the lines first suggested by my associate in practice, Dr. J. M. Mathews; however, there are a few points in treatment on which I beg leave to differ with him. Every case must be relieved, after which if the tumor continues to grow, further treatment must be instituted, and, perhaps, the most effective and simple treatment consists in first emptying the bowels with a dose of castor oil, then irrigating with warm or cold water. After peristalsis has ceased, adhesive strips are applied to the nates, holding them closely in position. The child is kept in bed in the recumbent position, and given liquid food. The bowels are allowed to act on the fourth or fifth day by giving an enema or a small dose of oil. If, in the meantime, there is a desire for the bowels to act, a few drops of laudanum may be given, and in such cases the time of confinement should be shortened.

It has been suggested by Dr. Mathews and others that the child lie on its back during the act of defecation, and the perineum well supported by the nurse. I believe that the better position is for the patient to lie on the abdomen; the straining will not be so violent and the nurse can much better protect the parts, thus preventing prolapse during the act of defecation.

After the bowels have acted thoroughly the adhesive strips should be reapplied, and the patient kept confined for three or four days, and the bowels evacuated in the same manner as before. If the case is a severe one, this feature of the treatment may be repeated three or four times. After the patient is out of bed the strips may still be applied, and removed when the bowels act, for several days.

In those cases where the bowel has protruded for several months or longer, the patient should always be in the horizontal posture, either resting on the back or abdomen when the bowels act. This may be kept up for two or three months. It will not, however, be necessary in the majority of cases. When the child is allowed to occupy the natural position at stool, there may be a small amount of cold water thrown into the rectum just prior to the act of defecation. The child should not be allowed to remain on the commode and strain.

If there is a tendency toward constipation, laxatives should be used. A small amount of some astringent may be injected at bedtime. If it should be found difficult to replace the prolapse, a general anesthetic should be given, when the task will be rendered easy.

I believe all ordinary cases of prolapse in children can be permanently cured if the foregoing plan of treatment is faithfully and intelligently carried out; and if such cases were properly treated at this period of life prolapse would be found much more infrequent in adults.

If there should be a rare case where this plan of treatment did not succeed, then some form of surgical intervention would be indicated.

Masonic Temple.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
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[Written for the MEDICAL BRIEF.]

Syphilitic Diseases of the Nervous System.

BY GEORGE OGILVIE, B. SC., M. B. (EDIN.), M. R. C. P. (LON.).,
Chevalier de la Legion d'Honneur; Senior Physician to the French Hospital, London, and to the Hospital for Epilepsy and Paralysis, London.
London, England.

No. III.

That epilepsy is occasionally produced by syphilis seems to be generally accepted. Of course, I am not speaking of cortical, symptomatic, or Jacksonian epilepsy; its connection with syphilis has long been established beyond doubt; both arterial changes or gummatous growths may lead to it. The knowledge of functional epilepsy as a consequence of syphilitic infection is of more recent date. The question here is of particular difficulty because most of those who accept syphilis as one of the causes of functional epilepsy, yet declare specific treatment to be powerless. Fournier's declarations on this point are also contradictory, as he describes two distinct forms, one which he calls secondary epilepsy, easily influenced by mercury, and a parasyphilitic form upon which the drug has no effect. That in some cases a syphilitic infection is the only possible cause in the patient's previous history, which may be held responsible for the outbreak of his epilepsy, is an argument of doubtful weight, because, in functional diseases in general, and in epilepsy in particular, the most minute search is frequently unable to discover any etiological factor. On the other hand, it is rarely possible to eliminate completely all other causes of epilepsy, such as heredity, trauma, mental shock, alcoholism, acute infectious diseases, heart disease, arteriosclerosis, etc. The neuropathic disposition, in particular, is so indefinite an entity that to exclude it is practically a matter of impossibility. In the etiology of functional disease, and in epilepsy particularly, we have frequently to content ourselves with a Socratean confession of ignorance. It is the "shrewd philosopher" who has a wherefore for every why, not the seeker after truth.

In favor of syphilis as a cause of epilepsy will be its appearance after the twentieth year, or between that time and old age. The first appearance of ordinary epilepsy after forty is not as rare as has been formerly believed, while in the great majority of cases it makes its *début* during the first two decades of life. That every case of epilepsy which is met with after a certain age, say after thirty, is syphilitic is an unwarranted exaggeration. Where there is no history of syphilitic infection, the onset of epilepsy after thirty years of age is still to be observed in from five to seven per cent of the total. My personal experience of syphilis as a cause of epilepsy is small

and inconclusive. It is easy enough to produce cases of syphilitic epileptics, but those with any claim to conclusiveness with regard to the causal connection of the two affections are rare. I do not recollect having seen more than two cases in which I felt justified in attributing the epileptic state to probable syphilitic infection. In one of them a sister of the patient had committed suicide; but the fits, with biting of the tongue and enuresis, appeared first at the age of thirty-three, three years after infection, and led, within six years, to considerable mental decay. It has been stated that syphilitic epilepsy does not, in the course of time, bring on that deterioration of the general mental faculties which, as a rule, follows the genuine form. But here, again, it has to be remembered that there are a good many epileptics who, after long periods of close observation, present no appreciable intellectual defects, while some authors have reported considerable degrees of dementia in cases of syphilitic origin. In my cases specific treatment was apparently of no avail. But to judge of the effect of treatment in epilepsy is a matter of great uncertainty, because there are many cases of epilepsy without a previous history of syphilitic infection, which, without treatment, show long-lasting remissions. That syphilis is among the causes of true epilepsy is a statement which I have to accept on authority, as I am not able to support it from my own observation. The "nature" of this epilepsy, its pathological substratum, is, like that of epilepsy, altogether a matter of mere conjecture. The so-called secondary epilepsy may be due to minute specific alterations in the gray matter of the brain; the parasyphilitic form is by some ascribed to the action of toxins. But little is gained in "explaining" the unproved by the unprovable, *ignotum per ignotius.*

Whether tabes and general paralysis are only two forms of the same process, differing by the localization of the morbid changes, or two distinct pathological conditions, is a question still *subjudice.* It is not my task to describe the clinical or anatomical picture of these diseases, but only to discuss the reasons for which they are generally considered as after-effects of syphilis, and how far this assumption is justified. For this purpose they may conveniently be treated together. It is, therefore, sufficient here to consider the connection between tabes and syphilis. The views expressed in this respect will, with slight modifications, hold good for general paralysis.

A few introductory remarks on the pathological process underlying the clinical picture of tabes are necessary for a full understanding of the question under discussion. Tabes is one of the system-diseases of the spinal cord—a primary degeneration of the posterior columns. But we know, through recent investigations, that the classical picture of tabes, which is familiar to us, may, in rare cases, be produced by a truly specific meningitis compressing the posterior roots, to which the degeneration of the posterior column is only secondary. Syphilis, as I have said before, is intrinsically a mimicking disease. These cases are fitly excluded from the range of true tabes under the name of syphilitic pseudo-tabes. We also know that true tabes may complicate itself with more or less extensive syphilitic inflammation of the blood vessels of the spinal cord. To one or the other of these two classes belong, in all probability, all those cases in which specific treatment is reported to have had a favorable effect. We further know that, as in every other chronic degenerative affection of the spinal cord, chronic alterations of the arterial walls may be found in the cord of the tabetic; but these changes do not represent the primary lesion, and are in no way characteristic of tabes. In an individual case it may, therefore, be difficult to determine with certainty the starting of the morbid process. The view, however, that the degeneration of the posterior columns is always secondary to vascular disease, and that the latter is of syphilitic origin, *i. e.*, that tabes is only one of the examples of spinal syphilis, has been rejected by the most competent workers on the subject. By a general consensus of opinion, in which the adherents of the syphilitic origin of tabes join with its opponents, tabes is regarded as a primary degenerative process in the nerve substance, entirely distinct from genuine spe-

cific disease of the spinal cord. Recently the opinion has been advanced by a neurologist of note that in all cases of tabes the primary lesion is a true syphilitic inflammation of the posterior lymph-vessels of the cord, but up to the present this statement stands without confirmation. Consequently we must accept the primary non-specific nature of the tabetic process as an established fact.

"Syphilitic, not in nature, but in origin"—this was the definition given of a parasyphilitic lesion. Now let us consider the facts upon which the syphilitic origin of this non-syphilitic disease is assumed. The most important arguments for it are certain statistics, which prove the existence of previous syphilitic infection in patients suffering from tabes; but before submitting these statistics to a closer analysis I shall briefly mention the other facts pointing in the same direction. It has long been observed that both tabes and syphilis of the central nervous system affect, with predilection, certain nerves or groups of nerves, in particular those supplying the ocular muscles. These ocular palsies are frequently transitory in character; in both the optic nerve is prone to be affected, and the pupillary and patellar reflexes are influenced in the same manner. A number of cases have been reported in which syphilis acquired late in life was followed by an uncommonly late appearance of tabes. Tabes has been found in both husband and wife; in such cases there is always a clear history of syphilis. In other instances one of the two suffers from tabes, the other from general paralysis. Here, too, previous infection can be proved in at least one of the patients. Inoculation experiments with fresh syphilitic virus on persons suffering from general paralysis have given negative results; similar experiments on the tabetic are not known. Although in most cases of true tabes there is no corroborative evidence arising from syphilitic affections of other organs, there exists now a series of cases in which such co-existence has been observed. In particular, in cases of infantile tabes and general paralysis there is frequently certain evidence of congenital syphilis. In the absence of *post-mortem* examination, however, it must remain doubtful whether these cases do not belong to the category of pseudo-tabes. At a comparatively early age tabes has been observed, together with aneurysm of the aorta, apparently due to arterio-sclerotic changes. Childlessness is frequent in married women suffering from tabes, and may be due to want of conception, to abortion, or to the early death of the child—usually occurring during the first month. I cannot here discuss at full length the relationship between each of these facts and the question under consideration. If taken singly, some of them may be open to a different construction; yet, taken together in their entirety, they undoubtedly strongly support the causal connection between tabes and syphilis. The most important argument in favor of such connection is, as I have said, derived from certain statistical inquiries. Here, however, the results vary between the widest limits. While some have found not more than from fifteen to twenty per cent of syphilitics among the tabetic, others report ninety per cent, and more. It is impossible to estimate accurately the spread of syphilis among a population. But from certain statistics collected in hospitals and private practice, it seems that in patients suffering from other nervous diseases than tabes or general paralysis, or from other diseases, whether nervous or not, a history of syphilis may be traced in about twenty per cent. Perhaps Fournier's estimate for Paris, that between fifteen and twenty per cent of the population are syphilitic, comes near the truth also with regard to other large cities. If these calculations are only approximately correct, it will appear that, according to some observers, the percentage of syphilis in tabes is not greater than what corresponds to the general distribution of that disease; while others report exorbitant figures, even approaching one hundred per cent. According to the former, syphilis would have no part in the production of tabes; according to the latter, it would be its predominant, if not its only cause. Moebius, for instance, and Marie consider syphilis as the exclusive cause of tabes. According to them, every case, without exception, is of syphilitic origin. Indeed, if the ninety-and-more-per-cent statistics

were reliable, this seems to me the only possible and unavoidable conclusion, for the simple reason—as far as I know, not yet pointed out—that these numbers are far in excess of those which are obtainable in cases of undoubted tertiary syphilis. For this very reason I believe that these excessive statements are not trustworthy. Neisser, the discoverer of the gonococcus, has for many years carefully collected the evidence of previous infection in cases of undoubted tertiary syphilis, in order to study the effect of specific treatment in the prevention of tertiaries. Only such cases were entered in his statistics in which the diagnosis of tertiary syphilis was "absolutely certain," and in which there were reliable dates regarding previous treatment. He consequently excluded cerebral and visceral cases of doubtful origin—parasyphilitic affections like tabes, general paralysis, leukoplakia, also malignant syphilis. Yet the percentage of cases in which the infection was "unknown," in which the tertiary lesion was the *first appreciable manifestation* of the disease, varied from between thirty and fifty per cent. Fournier, among his cases of gumma of the tongue, found more than forty per cent without evidence of previous infection. Similar experiences have been reported by other observers. These numbers seem to me to be in flat contradiction to those reported in cases of tabes, unless tabes is a disease *plus syphilitique que la syphilis*. A close consideration of some of these extraordinary statistics seems to confirm the opinion thus formed of their validity.

Some years ago Fournier gave a summary of a thousand cases of tabes. The cases were "chosen from among many others." He made it a point to include only "precise, incontestable facts, relying on information intelligently given by the patient, on well-established antecedents, sometimes even on actual manifestations of syphilis. In one word, a thousand cases where either the existence or the absence of syphilis in the patient can be affirmed categorically." This eclectic character of his series seems to deprive it of most, if not of all, demonstrative power. In the first place, to exclude, categorically, syphilis is an utter impossibility, particularly if one believes like Fournier, that congenital syphilis may, with or without previous symptoms, make its appearance up to the age of sixty. But in order to determine the percentage of syphilitic infection it is indispensable to include all cases of tabes. The large number of cases, the "many others" in which previous infection remains doubtful or could not be proven, although it could not be "excluded," form as important a part of the statistical material as those either strictly negative or positive. This omission is the fundamental fault of Fournier's calculation. Once more syphilographers' statistics are bound to be at variance with, and less conclusive than, those of the neurologist, because only those with a history or a suspicion of syphilis will, as a rule, seek his advice, while the others will remain with the neurologist, or general physician. The result of Fournier's eclecticism is that he finds ninety-two or ninety-three per cent of certain syphilis to seven or eight per cent without antecedents, and he adds that this "quotient is a minimum only," because, in from six to ten per cent, syphilitic antecedents are missing in any syphilitic affection whatsover. The contradiction in which he thus entangles himself is obvious, and is further increased by the emphatic statement that syphilis is *not the only cause of tabes*. If these eight per cent (the average between six and ten) have to be added in every syphilitic affection whatsoever, then we have for tabes a hundred brimful, and there is no other cause of tabes possible but syphilis; but then it also follows that in his eight per cent without syphilitic antecedents, the absence of syphilis could not be "categorically affirmed." Although I am not a "great arithmetician," like Cassio, yet I make bold to maintain that these more-than-ninety-per-cent statistics are fictitious and fantastical figures.

I want briefly to refer to another statistical inquiry relating to the same point which also seem to me open to some criticism. Byron Bramwell published in *Brain* an interesting and instructive analysis of one hundred and fifty-five cases of tabes. On the point in question, viz.: The connection between syphilis and tabes, I cannot approve of the course

adopted by him. He does not attempt to discriminate between hard and soft sores, and, consequently, takes a venereal sore with or without secondary symptoms as evidence of syphilis. This must materially impair the validity of his conclusions. Not only the soft sore, but, for instance, herpes of the prepuce, may also be included in his statistics. He suggests that the toxins of the *soft* sore may produce the same effect on the nervous system, but up to the present we know nothing of the constitutional effects of the *soft* sore, much less of its toxins. In all probability the *soft* sore is not a pathological unity, but may be produced by several micro-organisms. Dualism, which, thirty years ago Hutchinson pronounced to be "dead if not yet buried," seems to have revived and regained its old position.

If, for the reasons given, the excessive percentages arrived at by some observers are open to doubt, there yet remain other statistics which seem more worthy of credence, and would testify in favor of a close causal connection between tabes and syphilis. Gowers, for instance, found fifty per cent, and others have come to similar results. Even these numbers would, in the light of what I have said above regarding the evidence of past syphilis in tertiaries, go far to establish syphilis as a potent, if not the only factor in the production of tabes. Indeed, taking this numerical evidence in connection with the other arguments briefly referred to, there seems to be a little doubt about the syphilitic origin of tabes, a conviction impressed upon me by personal experience. Yet there remain certain apparently well-authenticated facts which seem to be in opposition to this doctrine. Among them, the most important seems to be that in districts and among tribes where syphilis has for long been raging endemically, *tabes and general paralysis are practically unknown.* The observations made by Neftel, Irennen, Jeanselme, Düring, Glück, and others in different parts of the world, agree that a population, although thoroughly impregnated with the syphilitic poison, may yet present *no specimens* of these "parasyphilitic" affections. Of general paralysis it has been said that for its development the co-operation of "syphilization and civilization" is necessary. This *bon mot* would hardly apply to tabes, because the seat of civilization is not situated in the posterior columns of the cord. The rarity, also, with which prostitutes present tabetic degeneration is difficult to reconcile with its syphilitic origin. Yet, on the whole, it must be said that the evidence in favor of a close causal connection between tabes and syphilis is exceedingly strong, although some facts remain which seem to point in the opposite direction.

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Food and Feeding in the Tropics.

BY D. J. JONES, M. B., C. M. (EDIN.),

Deputy-Coroner, South Breconshire; Late Chief Medical Officer Government Railway, Lagos, West Africa, and to the Government Railway, Bristol, North Borneo; Late Medical Officer, Government Surveys, Ashanti, West Africa, London, England.

Considerable attention has been paid of late to the subject of dietetics; in other words, to the regulator of food and the principles and practice of feeding. It is of vital importance, not only to the individual but to the prosperity of nations. It involves many important considerations, and its discussion demands not only a knowledge of the digestive processes carried on in different portions of the alimentary canal, but an intimate acquaintance with the general principles of metabolism.

Having spent many years of my life in the tropics, I am naturally interested in all that appertains to the hygiene of hot climates, and especially to the regulation of diet, both in health and disease. It is a subject on which much has been written, and it is generally admitted that the climate of a country exerts a marked effect on the health and character of the inhabitants. The power of endurance of Europeans settled in India is often severely taxed, though the strain is often due more to the habits of the individual than to his environment. There is no question that by the exercise of reasonable precautions immunity may be increased, and that with care anyone not suffering from organic disease may adapt

himself to the altered conditions of existence, and to extremes of temperature and climatic change. It is especially in India that the subject is of paramount importance, for, without attention to these matters, health is impossible. Sir Joseph Fayrer (*Preservation of Life in India*, 1894) points out that "Exposure to the direct solar heat or to a high temperature in the shade may induce heat exhaustion, ardent fever, heat asphyxia, and other evils of a more insidious character by injuring the nervous system, increasing irritability, depressing vital energy and affecting the internal organs, especially the liver, which is already overtaxed by eliminating waste products, and compensating for the diminished respiratory excretion of carbonic acid through the lungs, the consequence of breathing a more rarefied and, therefore, less oxygenated atmosphere. In hot climates the blood becomes deteriorated; there is a tendency to liver affections, fever, boils, and a variety of ailments."

The chief points to which attention must be directed are the observance of simple hygienic rules, the avoidance of exposure to excessive heat, and other obvious causes of disease, and, above all, strict observance of dietetic considerations.

That the mortality amonst children born in India is high is a matter of common knowledge. The injudicious feeding of a child in the first twelve months of its existence, either destroys its life or leaves indelible traces on its physical conformation. The ill-nourished child must be sent to Europe, or it will deterioriate slowly but surely. The physical change is not easy of definition, and is not readily described, but there is a general progressive feebleness, and want of tone, readily recognized by the trained observer. In adults, excepting those of the most robust constitution, the effects are characteristic, and the influence of a tropical residence on Europeans is sufficiently indicated by the waste of health which ensues. The nervous activity is at first, and for a short period, improved, but it soon undergoes a process of deterioration. To preserve health under such difficult and exceptional circumstances attention must be paid to clothing, to the selection of a habitation, to the question of judicious exercise, and, above all, to the regulation of the diet.

It is generally admitted that a regiment which is well adapted to a cold climate, is ill-suited to the requirements of those living in a much higher average temperature. The consumption of meat and of richly flavored dishes so common in England, are entirely out of place in India. Sir Joseph Fayrer says:

"With regard to diet, it should be plain and simple; for new arrivals it is better to abstain from much animal or stimulating food, with the view of avoiding plethora, dyspepsia, malassimilation and congestion of the liver. Moderation is necessary, but it is not expedient to imitate too closely the natives of the country in the character of their food. The stomach of the European will no more obtain from the diet of a Hindoo all that is necessary for nutrition than it could in other circumstances from the blubber that delights whilst it nourishes an Esquimo. Habit, in these things, becomes hereditary, and our machinery is not adapted for sudden changes. But the principle of simplicity is sound, and the food should be modified to suit changed circumstances. As a general rule people eat too much in India—more than they can assimilate, or is needed for nutrition. The consequence is derangements of digestion, faulty assimilation, disordered liver and engorged portal system; bowel complaints, and the presence of effete matter in excess in the blood."

It must be admitted that with many people animal foods constitute the most attractive and appetizing form of diet, so that there is great danger of this being taken in excess; that is, in quantities beyond the oxidative powers of the tissues. The necessity for limiting the amount ingested under circumstances not favorable for its combustion is apparent.

The classification of foods necessary to support life in its highest state of vigor is based on the fact that milk, the staple food of the infant, contains all the alimentary substances necessary for life and growth, and the nearer the dietary approaches that simple standard the more likely is it to be assimilated and to supply those essential materials without

which the production of energy can not be efficiently maintained.

Pure milk, however, is not so easily procured as might at first sight be imagined. In England it is usually drawn from the cow, but in India milk from the goat is also used. Goat's milk is richer in cream, but poorer in proteid matter than the milk of the cow. There are objections to its use, for goats are dirty feeders, and in India are allowed to roam anywhere in search of food. It must be admitted that the same objection applies to a very great extent to cow's milk: Dr. Andrew Davidson (*Hygiene and Diseases of Warm Climates*, 1893), says:

"In India and in the tropics generally cows are often fed on the litter from stables, and the places in which the animals are kept are filthy; their limited supply of food leads them to feed on any sort of garbage. It is wise, therefore, to use no milk which has not been previously boiled; if it is possible to do so, the feeding of the animals and the milking should be under supervision, but the use of raw milk should never be permitted. Milk which has been boiled should be so guarded from contamination by keeping it in a perfectly clean and well-ventilated place, that there can be no danger of its becoming infected by dust or flies. In India, where cholera is endemic, special attention should be paid to this point, as it has been shown that the danger is greater when boiled milk is used, as boiling delays the acid fermentation of the milk, which, of itself, helps to inhibit the growth of the cholera organism."

In my own practice I endeavor, as far as possible, to obtain a supply of milk from farms, the water supply of which is above suspicion, for contaminated water is one of the most fruitful causes of milk infection. What I require and insist on having; is a pure, clean milk of a specified quality, derived from healthy cows, not under physic. In addition, it must be properly strained and cooled, and protected against contamination and infection. This, in England, at all events, in all large towns, presents no difficulty, but in India and tropical countries generally it is impossible, so, that as an article of diet, especially in illness, milk has to be employed with caution and reservation.

An excess of proteids, especially in the form of meat, causes rapid metabolism and tissue change, which, if not counteracted by an amount of active exercise impossible in hot climates, results in the overloading of the blood with unoxidized products, and with the appearance in the urine of urea, uric acid and possibly albumin.

Foods for all practical purposes may be divided into two classes. (1) Organic, and (2) Inorganic. The inorganic substances are water and mineral substances, such as the salts of potassium, sodium and lime, together with minute quantities of phosphorus and chlorine. Some of these ingredients are held in solution in the different beverages which we drink at meals, or between meals, and others are supplied in common table salt.

The organic nutrients may be divided into those which are nitrogenous and those which are non-nitrogenous. Amongst the nitrogenous foods we include proteids, of which the most familiar examples are casein, myosin, gluten and legumin. The non-nitrogenous group includes the carbohydrates, of which sugar and starch are common types, and fats, such as butter.

Different classes of foods fulfill different functions, and it is especially to the proteids and the inorganic materials we look for building up and repairing the tissues, and generally keeping the human machine in order. For many years it was believed that the carbohydrates and the fats were used solely for maintaining the temperature of the body, but this is erroneous, and we now know that all forms of food may be utilized for increasing strength and activity. In spite of this proviso, physiologists are agreed that the proteids are the most potent factor in tissue formation, and in keeping body and mind in their highest state of efficacy. In temperate climates meat forms the staple article of diet, whilst in colder climates there is usually a plentiful addition of fat. In the tropics, where the mean diurnal temperature is high, it is found as the result of experience that it is impossible to eat much meat, and that when the consumption of it is large it is not assimilated, and gives rise to gastro-intestinal disturbance, eventuating in chronic diar-

rhea and dysentery. Meat extracts have practically no nutritive value, so that it is necessary to seek for some form of proteid other than meat. Gelatin is not a substance suitable for the purpose, for it is not capable of tissue formation, and is in no sense a substitute. A man fed solely on jelly would soon die. In casein, the principal proteid of milk, we have a perfect substitute both for crude milk and for meat. It contains no nuclein, and yields no uric acid, so that it is especially indicated as a dietary for gouty people. Moreover, it yields no carbohydrate when split up, and may be used with perfect safety in cases of diabetes. It is a tasteless, compact, easily digested proteid. Resorption is so complete that there is no possibility of its undergoing fermentation in the intestines, even should it not act, as some have supposed, as an intestinal antiseptic. It is digested with ease, and is absorbed in its entirety—a point of some importance, for the value of food depends, not only on the percentage of nutritive material it contains, but also on the readiness with which it is assimilated. Another valuable peculiarity and property of casein is that it contains phosphorus, an important constituent of all tissues. Dr. C. D. F. Phillips, both in his *Materia Medica and Therapeutics* and in his recent articles in the MEDICAL BRIEF (November and December, 1906,) has dwelt so fully on the therapeutical properties of phosphorus that it is not necessary that I should dilate on that point. It must be remembered, however, that the quantity of phosphorus contained in casein itself is small, and that any preparation of casein containing a larger percentage of phosphorus is an organic, and, consequently, readily assimilable, for it has the greater advantages, both as a food and as a stimulant to the growth of tissue. The whole question of lecithin derivates is a complex one, but is well worthy of study from the point of view of applied dietetics. I have dealt more fully with this aspect of the subject in my paper on "Food and Feeding in Alcoholism" (MEDICAL BRIEF, *and Circular*, 1905).

Reverting to the treatment of diseases incidental to tropical life, we find that disorders of the stomach, intestines and digestive organs generally are more frequent than in Europe. With regard to the symptomatology and the pathological changes met with in these complaints, they exhibit no material differences from those of the temperate zone, with the exception that they more frequently assume a chronic character, causing emaciation, anemia, and frequently death. Their frequency is explained by the sensitiveness of the intestinal canal peculiar to the tropics, and attributable to the altered conditions of the circulation, and the atony of the intestinal muscles, rendering the mucous membrane of the intestine more easily affected by infectuous lesions than they would be under normal conditions. Errors in diet, contributed to by the rapid decomposition of articles of food, and by the tendency to chills, furnish incidental causes.

Speaking of tropical dysentery, Scheube (*Diseases of Warm Countries*) says: "Dietetic treatment is of greatest importance, and should always go hand in hand with other remedies. In acute dysentery only fluid food must be taken until an improvement occurs. Boiled milk, taken lukewarm, is the best, and if the patient can not take it pure, the addition of a little soda water, lime-water (a tablespoonful to the cup), or even a little tea, coffee or cocoa is permissible. Where fresh milk is unattainable, unsweetened condensed milk can be given. Next to milk, gruels and farinaceous foods are recommended, also thin soup, beef tea and meat juice. In chronic dysentery a pure milk cure is most suitable first of all, later on its place may be taken by a digestible but strengthening diet."

It will be noted that much reliance is placed on a pure milk diet. With this I am in accord, but undoubtedly many chronic dysenterics are unable to assimilate the large quantity of milk—three pints or more—necessary to furnish them with the requisite amount of nourishment to enable them to maintain body-weight. In these cases the addition of a certain proportion of casein to the milk will be found advantageous. This accords with the principles laid down by Sir Patrick Mansor (*Tropical Diseases*, 1900), who says:

"Were it possible, it would be well to stop all food; this, of course, is impossi-

ble, so we make a compromise between the therapeutical indication and the physiological necessity by reducing the diet to a minimum, and selecting only such foods as, while possessing considerable nutritive value, yield but a small fecal residue."

With regard to Mediterranean fever, Malta fever and their prototypes, it must be remembered that formerly they were treated with a variety of depressing drugs, such as antimony, with the result that the patient rapidly became anemic. A more recent custom was to give phenacetin, salicylate of sodium, and other anti-pyretics in large doses, with the effect of weakening the heart's action, and rendering the patient less able to resist the ravages of the disease. Fortunately, rational therapeutical measures are now in vogue, and we rely to a very great extent on the judicious administration of nervine stimulants. The patient is no longer kept on a pure milk diet, and the stomach and intestines are not distended with indigestible foods, and the products of their decomposition. Strength is maintained, and the patient is encouraged to make a good fight for life by giving him food which he can digest, and which serves to stimulate the nerve cells of the brain and cord.

In sprue, which is prevalent in India, China and Java, and of the causation of which little is definitely known, drugs alone are of very little use, and the treatment consists of absolute rest in bed with a dietary consisting chiefly of casein and the glycero-phospates. This is better by far than milk alone, for lecithin, even in minute dose, exerts an extraordinarily favorable influence upon nutrition, its effects in this regard being catalytic, or of the nature of a ferment. In the treatment of this disease, and as a means of combating its depressing influence, reliance may be placed on this regimen combined with physiological rest. As accessory measures I have no objection to the occasional administration of a raw egg, or of a little boiled arrowroot, but meat extracts and meat juices do more harm than good.

The same mode of treatment is applicable to beri-beri, a curious form of multiple neuritis of unknown etiology, prevalent in the Malay Archipelago, in China, Japan, the West Indies and some parts of Burma. It is especially apt to prove fatal when the neuritis affects the vagus nerve, giving rise to irregularity of the heart's action and breathlessness. There is no more remarkable triumph of modern hygiene than that which followed dietetic reforms at the instigation of the Japanese physicians. A remarkable diminution in the disease followed the continued use of a diet rich in nitrogenous ingredients.

The same general principles of treatment apply to malarial fevers, Malta fever, and most other diseases incidental to hot climates.

I have endeavored in this paper to emphasize the fact that the laws of nature conduce to the adaptation of the supply of food to the demands. We all recognize the fact that cold or exercise sharpen the appetite and increase the desire for food. A warm, enervating climate has the opposite effect, and dulls the appetite. It is better to realize this fact, and in tropical climates to make milk and fruit, with a small allowance of meat the staple articles of diet. When milk, in a condition of purity, is unobtainable, we must rely on what may not inappropriately be called the active principle—casein. What is applicable to a condition of health under these circumstances holds with the more force in all attacks of others attended with elevation of temperature, whether bacterial in origin or not.

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Squint and Ocular Paralysis.

BY E. LUCAS HUGHES, L. R. C. P. (LOND.), M. R. C. S. (ENG.),

Fellow of the Royal Institute of Public Health; Late Ophthalmic Surgeon to the Hope Street Hospital.
Liverpool, England.

II.

Binocular, single vision, finds its highest development in man, and it is upon this fact that the whole subject of extrinsic ocular muscle anomalies seems to hinge, for animals, having only a much less degree of binocular vision, are never noticed to squint, except in the rare cases

of the paralytic variety, due to some lesion of orbit, optic nerve tract, etc. Paralytic squint is almost always associated with, as its most prominent symptom, binocular double vision or diplopia. In cases of ocular paralysis the squinting eye is not the eye that is really affected, *i. e.*, it is not the eye with the paralysis, but it is the other one. This is due to the fact that neither squint—an objective symptom of ocular paralysis—nor diplopia, the subjective symptom, come into play at all, except when there is a binocular associated movement towards that side where there is the paralyzed muscle or muscles. Take, for instance, the two muscles which have associated binocular movements to the right or to the left; the left internal rectus muscle pairing with the right external rectus, and right internal pairing with left external. Say one of the externals is paralyzed, the right external; what happens? Does the right eye show any squint? No; it can not move to the right beyond a certain point; as soon as it reaches the area normally controlled by the right nervus abducens with its muscle it stops, it can go no further; the healthy partner in this binocular movement is able to turn the left eye, however, to the very fullest extent, which, indeed, it does, causing an extreme degree of convergent squint. The innervation, which fails in the one eye to bring about the desired movement, is altogether too much for the healthy eye, and it is consequently this eye that squints, or, in other words, overacts its part, when called upon to look to the right; the side where there is the paralysis in its fellow. When the eyes look away from the paralyzed side there is no squint and no diplopia, but diplopia and squint both become manifest when an attempt is made to look in the direction of the affected muscle. Theoretically, there should be some amount of strabismus of the paralyzed eye, but, as a matter of fact, equilibrium is maintained fairly well on account of the accessory abductors being unaffected, *i. e.*, the two oblique muscles.

Similarly, the accessory abductors could maintain balance, if there were paralysis of an internal rectus. A paralyzed eye can, therefore, fix so long as it is looking at a point outside the area of its paralysis, but, owing to nerve force, meeting a check in the one, and becoming excessive in the other, neither eye can be said to properly fix in ocular paralysis when looking at a point inside the visual area of the paralysis.

Ordinary functional squint is thus seen to be an entirely different affection from the squint which is associated with ocular paralysis (strabismus paralyticus, or luscitus). The functional variety is present in all directions in which the eyes are turned, and the squint is always to the same extent. In the functional case the one eye squints while the other fixes; in the paralytic the one eye squints while the individual is struggling to do what the paralysis has rendered impossible, *i. e.*, to turn the paralyzed eye to the affected side. The more the effort is made the more becomes the squint in the paralytic variety, but in the functional variety, the two eyes are, relatively to each other, at a wrong angle, which does not vary.

Functional strabismus, or concomitant squint, is essentially a condition of childhood. Ocular paralysis may occur at any age. The latter is a pathological manifestation of some disease, brain lesion or some other more or less serious condition, whilst the former is the result of some educative defect, associated with the development of binocular single vision. Concomitant strabismus is nearly always either convergent or divergent, and, as is well known, closely associated with errors of refraction, usually, but not always, with hyperopia in convergent cases and myopia in divergent; paralytic squint may be in any direction, according to the muscle that is paralyzed, the overaction in excessive innervation, or the unopposed action of a muscle, as may sometimes be the case, although rarely so entirely unopposed as to cause a constant squinting of a paralyzed eye.

Two fundamental errors have, in the past, falsified our ideas on the nature of functional (non-paralytic) strabismus. One has been that of attributing the deviation of the eyes simply to a supposed muscle defect, and the other has been the identifying of squint with this deviation. Unlike strabismus, of course, the squint

of ocular paralysis is really owing to a muscle defect, *i. e.*, the paralysis, the opposite muscle being able to act unopposed, or, as explained above, an overacting muscle causing a very pronounced squint in the other eye, that muscle being associated with the paralyzed muscle in binocular movements. But, even here, squint is only a symptom; even the paralysis is not all that we have of the disease; there is the lesion at the floor of the fourth ventricle, or elsewhere, whether it is paralytic or functional. The actual squint is, therefore, seen to be only a symptom, in the past mistaken for the whole disease. Pott's disease might just as well be dedeseribed as "a deviation from its normal shape." We should be extremely sparing of operations when the squint is the result of ocular paralysis. At the onset these cases call for medical treatment. The deviation is often transitory, and generally caused by a nuclear lesion due to tabes, syphilis, intoxications, etc. Only after prolonged medicinal treatment, and when the paralysis has become well established and well defined, the patient suffering great discomfort from diplopia, should operation be thought of.

Convergent functional strabismus needs to be considered separately from the di vergent variety, as its etiology is quite different. It is best defined as a lack of development of the faculty of fusion, so that proper binocular vision is unable to take place, this resulting in the deviation inwards of the visual axis of one of the eyes from its correct position of fixation. There are, therefore, two essential conditions in every case of comitant convergent squint. One is a defect of the fusion faculty and the other is an abnormal convergence of the visual axis. Other conditions arising from these two fundamental ones, or at least associated with them, are (*a*) the presence of some error of refraction, nearly always hyperopia or hyperopic astigmatism, (*b*) suppression of the vision of the eye that squints, which quickly results in a functional but only central (macular) blindness, termed amblyopia exanopsia, or loss of central vision of an eye from disease. (*c*) In rather rare cases this emblyopia is not an acquired one; it may be pronounced congenital, if there be sufficient evidence in the history of the case to take that view.

A child is so young and suppression of the vision of one eye takes place so soon, almost *pari passu* with the development of the deviation that no diplopia is experienced by the patient. Here it markedly differs from the squint of ocular paralysis, where diplopia is the most marked and constant subjective symptom, in most cases, indeed, the one symptom that troubles the patient.

The amount of squint should always be measured. This is most readily done by comparing the two small reflections of a light or mirror, in the dark room, thrown quickly onto the two corneas (Hirschberg's mirror test); more accurately by the Maddox tangent scale, by the perimeter, or by Worth's deviometer. The visual acuity should always be taken of both eyes, but especially of the squinting one. This is done by means of balls of different sizes thrown across the room, these being made for the purpose, as much as possible to correspond with Snellen's or Wallace's type scales. I have recently devised a type card of brightly colored animals, in nine different colors, the smallest line of animals being about the size of D-6 (Snellen's letters). These are in very pronounced colors. The child is asked to look at them and say what they are; a blind hiding the upper ones, which can be gradually pulled up if the child is unsuccessful in the lower. It saves the child running about the room and knocking against things. The child is immensely taken with the pictures, as they are gradually uncovered, and exclaims: "Geegee," "baa lamb," "doggie," etc., as he sees them revealed. To find the separate movements of the eye a silver ball suspended by an elastic cord can be dangled in different directions before the uncovered eye; first one eye being covered and then the other. This is much better than the surgeon's fingers, being an uninteresting object to the child. A point to be early determined in every case is the amount of dynamic convergence. This is estimated by bringing the object looked at, the surgeon being at arm's length, and two eyes being uncovered, closer and closer to the fixing eye.

It is obvious that orthoptic measures can only be successful in concomitant, *i. e.*, functional strabismus. I have been very successful in all cases where the squint has not exceeded twenty degrees of convergence, and the amblyopic condition of the squinting eye has not been too long established. My method is to ring the changes with Worth's amblyoscope and the ordinary steroscope of Holmes. With the amblyoscope I make use of the brightest and strongest electric transmitted light I can get, so as to compel both eyes to see the two objects simultaneously. If there be any suppression of vision in one eye, I give atropine for the fixing eye only, and only for a week or a fortnight, at most, so as to develop the vision of the squinting eye. Then I try again with the amblyoscope until the child can see and bring together the two pictures. Half the battle is then over. I can pronounce then a hopeful prognosis, providing the exercises are patiently continued, the tendency to amblyopia having been conquered. Convergent squint which is not due to lack of development of the fusion faculty, the common cause, is always due to a breakdown of the balance of muscle power in adduction and abduction of the eyes. The tendency to this breakdown is termed muscular insufficiency or heterophoria, and the term heterotropia is given by British oculists for the manifest squint that ensues owing to this breakdown. Cases of heterotropia, the term used in this limited sense, are very rare. If seen soon after the occurrence of the squint, they can be cured with a little patient endeavor, by means of the ordinary stereoscope, bimanual drawing, etc. If allowed to continue for long, of course, they call for operation.

The ordinary squint of children, due to lack of fusion faculty development, is an internal strabismus, and nearly always develops before the age of seven, usually at the age of three years. The earlier the squint develops the more rapid will be the suppression of vision, going on to amblyopia, of the squinting eye, so that with well-marked amblyopia at seven years of age, the squint having been manifest for some time, the hope of a cure by non-operative treatment is not great. The younger the child and the less the duration of the squint the more hopeful the prognosis. The rare cases due to loss of muscle balance (heterophoria) occur in much older subjects, nearly always young adults, or adolescents, never in children. I have, however, recently had a case where the age has been as young as thirteen years for the onset of the actual squint. Older children, like those of this age, who are myopic, commonly develop a divergent squint, but these have nothing whatever to do with the heterophoria cases (heterotropia). Divergent squint resulting from myopia will be dealt with in a subsequent paper. A case of heterotropia seen recently is as follows: W. C. G., aged fourteen; schoolboy. Father died of consumption at the age of forty. Mother alive; healthy; aged thirty-five—no ocular trouble. When he came home for the holidays last Christmas, mother noticed for the first time, a "stand," "as if the eyeball turned in." No squint had ever been noticed before then. She took him to an oculist, who ordered him glasses, +0.5 spherical, for reading. He never complained of any pain or headache. The squint seemed to have been only occasional at first, but lately it has been much more constant. On inspection of the eyes nothing abnormal can be made out, except a distinct squint of the right eye, about 15°. Vision of R. eye $\frac{6}{6}$, H. M. O. 5^{6}_{6}, L. eye $\frac{6}{6}$, H. M. O. 62^{6}_{6}. The mobility of the eyes is good in all directions. Well-marked esophoria is discovered by Maddox rod test, etc., requiring a 12 $\triangle$ prism, apex in, to overcome. As the boy was going back to school the next day it was not advisable to work out his refraction with a cycloplegic, but he obviously had a slight degree of simple hyperopia, and he was ordered to continue what he was wearing for reading only. It was also advised that he should have stereoscopic exercises, while at school, using Holmes' stereoscope and Kroll's pictures for half an hour every day, with bimanual drawing, two or three times a week. January 2, 1907.—Patient has been having the exercise as directed, and the eyes are very much better. The mother was in fear and trembling when she went to meet him at the railway depot, and was agreeably surprised at the marked change in his appearance. There still remains about

3° to 5° of internal strabismus; R. eye measured by Maddox tangent scale. He can blend in the stereoscope up to I. 9 of the Emil Hegg series. Can manage all the Kroll cards except one. January 14th.—The boy has been coming every morning, the last ten days, for an hour's exercise. He soon succeeded with all of Emil Hegg's cards, and then with Javal's cards. Can spell out all the French words of the latter. I have, therefore, given him several cards of my own design, making them as difficult as possible.

He can blend ordinary handwriting in duplicate on a card, as well as the very fine print; reading it all without difficulty, even when thick lines are drawn across many of the letters: V. $\frac{6}{6}$ with both eyes. There is now orthophoria for far and near. His squint has completely disappeared, and his mother is delighted with the cure.

The diagnosis in this case rested upon four factors, namely: (1) The only slight and almost equal amount of refractive error, (2) the age of onset of the squint, (3) the absence of amblyopia (+0.5 spherical giving him perfect vision), and, (4) the well-marked esophoria, at once discovered when his muscle balance was examined with the Maddox rod.

[Written for the MEDICAL BRIEF.]

Diagnosis and Treatment of Measles.

BY H. M. MCCLANAHAN, A. M., M. D.,

Professor of Pediatrics in the College of Medicine of the University of Nebraska.
Omaha, Neb.

There is in measles an inflammation of the mucous membrane involving the eyes, nose, throat and trachea. This is undoubtedly due to the poison throwing out an eruption upon its surface, following this is the eruption upon the skin, the macular spots, and when this has appeared the eruption upon the mucous membrane should subside.

The recognition of Koplik's spots is the most important diagnostic symptom, and by means of this symptom diagnosis can be made from two to four days before the appearance of the eruption. In a child with a temperature of 102°-3°, decided bronchial cough, suffused eyes, etc., Koplik's spots should be searched for. It is necessary to have the child in a good light in order to discover these spots, and the entire buccal cavity should be carefully inspected. In my experience they usually appear on the inner side of the lips and cheeks; they are small, pearly-white spots, slightly raised, and when seen in a strong light, are quite distinct. They are readily overlooked, because it is only recently—or within the past few years—that they have been recognized as a diagnostic symptom of measles.

During the prodromal period the temperature is out of proportion to the local signs and symptoms. It is not unusual to have a temperature of 102°-4°, with a severe cough, and yet no râles in the lungs to indicate any inflammation of the air vesicles.

There is little difficulty in diagnosing measles or in differentiating the disease from Rötheln or German measles, if the following differences are kept in mind:

1. The slight prodromal stage in the German measles in contrast with the marked symptoms in measles.
2. The enlargement of the post cervical glands which is constant in German measles, these glands being both enlarged and tender.
3. The absence of the Koplik's spots.
4. The rash in German measles is lighter, the maculæ are smaller, and the eruption disperses itself over the body more quickly.
5. An attack of measles does not protect against German measles, and *vice versa*.

When diagnosis has been made, the child should be put to bed, and kept there until the eruption has faded. In this way it is possible, in my judgment, to prevent the occurrence of broncho-pneumonia, which is such a dangerous complication, and adds so greatly to the mortality of measles.

Another and very serious complication of measles is catarrhal laryngitis, producing severe dyspnea. There are cases of this type which it is almost impossible to differentiate from laryngeal diphtheria, and, indeed, in doubtful cases, diagnosis can only be made by the culture test. That is, swabbing the throat and determining

the presence or absence of the Klebs-Loeffler bacillus.

Otitis media is another complication of measles not sufficiently recognized. My observations lead me to believe that this complication is as frequent in measles as in scarlet fever, although the inflammatory action is not so destructive to the structures of the middle ear as in the latter disease.

The physician should also be on his guard for nephritis. This complication, while it is much more rare than in scarlet fever, is of more frequent occurrence than was formerly believed.

There may be catarrhal involvement of the eustachian tubes and the formation of pus owing to the presence of the pus cocci, and other symptoms growing out of that inflammation. In like manner when it extends through the bronchial tubes to the air vesicles, we get bronchial pneumonia, in which we usually find a mixed infection. In fact, the broncho-pneumonia of measles is a more serious form of pneumonia, and is more likely to be followed by empyema than pneumonia under any other circumstances.

It is unfortunate that the laity look upon measles as a mild disease; because of this they grow careless, and many cases do not receive proper treatment. Not a few cases, when put to bed and given a liquid diet, recover without further treatment. But where the cough is severe and annoying, and prevents rest, I think something to allay the cough is entirely proper, and there is no better remedy for this purpose than paregoric, given in from ten to twenty-drop doses every half hour until the cough is relieved. Where the temperature is high enough to impair the integrity of the nervous system, as indicated by twitchings and occasional convulsions, remedies directed toward the relief of the temperature are entirely proper.

As stated before, the child should be kept in bed until the rash fades, then, if there is no complication, it may be permitted to be up and dressed. When it may go out of doors, will depend upon the weather and season of the year. I think it valuable for the practitioner to remember that when the rash fades, there is no complication, the temperature will go almost to normal. On the other hand, when the rash fades, if the temperature remains above one hundred, it is almost conclusive evidence that there is some complication, and this is most likely to be either otitis media or broncho-pneumonia.

1312 North Fortieth Street.

[Written for the MEDICAL BRIEF.]

The Surgery of Exophthalmic Goitre.

BY J. WARREN LITTLE, M. D.,

Clinical Professor of Surgery in the Medical Department of the University of Minnesota. Minneapolis, Minn.

In considering the surgery of a disease it is not enough to be able to say that such a disease is present in any case, but the various forms, typical as well as atypical, must be recognized, and in such cases selected for operation as surgical experience and judgment may dictate.

A good example of this is the old familiar theme of appendicitis; at one time the dictum was "operate as soon as the diagnosis is made." We know now that there are many cases in which this is very bad advice.

This same advice applied to exophthalmic goitre would be more disastrous because the operation is very much more difficult and only a few operators have cases enough to make them really expert. Then, too, there are certain inherent dangers that no amount of cleverness can avert.

It is generally considered that in exophthalmic goitre there is a hyperactivity of the thyroid gland, the same symptoms being produced in a normal subject by giving large doses of thyroid extract. Occasionally a case is met with in which the ordinary exophthalmic symptoms are present—and no enlargement of the thyroid exists. Such an atypical case came under my care about two years ago. A woman about twenty-five years of age consulted me on account of marked exophthalmia. She said she had consulted several oculists, who said her vision was perfect, and could give no reason for the condition of her eyes. At the time of my examination she had a normal pulse, no tremor, no enlargement

of the thyroid; in fact, her neck seemed smaller than normal. She had no symptoms of cerebral pressure or circulatory disease. I told her she had only one symptom of exophthalmic goitre, but that others might appear later and asked her to report occasionally. This she did. Several months later her pulse had quickened perceptibly and the usual restlessness began to be manifest. About a year from the time I first saw her, she was persuaded by her sister to accompany her to a dance in which she had joined with spirit. Near the close of the dance she was taken with tachycardia and her friends thought she would die before they could get her home, and well may they have been alarmed, for a patient with more tumultuous heart action and difficult breathing I have never seen, and I would not have been surprised to see her expire at any moment. Her neck, however, did not increase in size, and there was no enlargement of the veins. At the present time she is quite well and has returned to work. Exophthalmia has subsided, her pulse is less than one hundred and the tremor and restlessness much improved. About the only treatment she received was rest and avoidance of all excitement. Such cases as the above are likely not common, but when they are met they do not require surgical assistance.

Another class of cases in which operation should be avoided is described by Thompson, thus: Acute toxic thyroidism in which there is fever, excessive tachycardia, precordial distress, gastric and abdominal pain, vomiting, diarrhea, sleeplessness, perspiration, sense of suffocation, great restlessness, edema of the feet, in fact all the symptoms of toxemia due to thyroidism. Such cases if operated are likely to prove fatal at the time, or escaping that, within a day or two following. I have a case that will illustrate the one just described.

A young woman about twenty-three years of age had exophthalmic goitre, with most of the symptoms just given. She had a large, soft thyroid—both sides being about equally enlarged. For several months I visited her occasionally at her home, as she was too ill to come to my office. I kept her quiet, had the galvanic current applied faithfully, injected the gland with tincture of iodine and did some other fool things which included giving a good deal of medicine that did no good. Rogers and Beebe had not then given us their serum treatment. She did not grow worse, but I became discouraged and thought she ought to do better and so told her parents. We had several frank talks about operating. This lasted perhaps a month, the patient and parents leaving the time entirely to me. Finally, in an evil hour, I concluded she was in as suitable condition as I could get her and had her taken to a hospital. She was emaciated, weak and nervous, had marked tachycardia and a dilated heart. Being afraid to give a general anesthetic, I used Schlik's infiltration method. The girl died on the table a few minutes after starting the operation. There was some hemorrhage, but it was not excessive. The patient complained of being faint, became unconscious and could not be revived. The excitement and shock proved too great for the dilated heart to withstand. I take this to be a case of bad surgical judgment. To be sure, the patient likely would have died without an operation, but it is far better so than such a termination. Great harm comes in frightening those away who could be saved. Personally, I have never thought well of the kind of reasoning that goes something like this: "There is nothing to lose, the patient will die if you do not operate—medicine will not save him." This is wrong; there is a great deal to lose, unless there is hope of success based upon rational surgical principles. The great wonder is that surgery has so well withstood such abuse. Shepherd says: "I am of the opinion that early operations are the safest and the class of cases most likely to be benefited are not the most severe ones, but those in which the gland is more enlarged on one side than another, in which, in fact, there is more definite tumor formation, in which the gland is so excessively vascular, and in which the enlargement has preceded the symptoms of Graves' disease by months and perhaps years. These might be called cases of enlarged thyroid with a mild form of Graves' disease, in which the gland is soft, vascular and evenly enlarged throughout; here operations are

usually most satisfactory, the after results being decidedly good."

The surgery of this affection is comparatively recent, and no concerted action has been taken by surgeons as to what cases shall be accepted and what rejected for operation. Consequently, I do not hesitate to say that statistics as to mortality are of little value. In the milder forms the mortality ought to be slight. In the severer forms on the border line, where it is a question whether the patient can survive an operation, the mortality will be great. Therefore, when an operator reports a number of cases with a death rate of five, ten or twenty per cent, unless the history and details of each case is honestly and carefully given, you have no way of concluding whether that surgeon is superior, ordinary, or really bad. I am convinced that in properly selected cases there is no disease in which the results are more gratifying to both patient and surgeon. It is not uncommon to see a patient who, before the operation, was nervous and anxious, with a pulse of one hundred and forty, become quiet and comfortable, with a pulse around eighty, in three or four days following it.

The difficulty in performing the operation depends very largely upon the individual case. In a simple or cystic goitre that is large and firm and has a strong capsule, it is quite easy. In a small, soft gland, deeply set with a capsule almost as thin as a veiling, as is frequently seen in Graves' disease, it is a most tedious and difficult one. Here the gland must be teased or coaxed out of its bed; every slip must be seen so that you are at all times in command of the field, otherwise you will be confronted with most annoying and dangerous hemorrhage.

A difference of opinion exists among surgeons as to whether general or local anesthesia should be used. Personally, I prefer the former and favor giving a hypodermic of morphia preceding ether.

If a patient is in too precarious a condition to be given an anesthetic, the operation should be deferred.

The parathyroid glands and recurrent laryngeal nerve can be as well or better avoided by most operators. We are hearing recently a good deal about parathyroid glands and their functions, and it may not be amiss to give something of their anatomy, etc., as having great value when the removal of the thyroid gland is considered.

The parathyroid glands (about the size of orange seeds and brownish red in color) are two minute structures, which lie in more or less close relation to each lateral lobe of the thyroid body. They are apt to be mistaken for accessory thyroids, but in structure they are different. One, more constant in position than the other, is situated on the posterior aspect of the esophagus at the level of the lower border of the cricoid cartilage, and in more or less intimate relation to the posterior border of the lateral lobe of the thyroid body.

The second parathyroid body is placed either in close apposition with the lower border of the lateral lobe of the thyroid, or on the trachea, at a varying distance below it. The inferior thyroid artery intervenes between the two parathyroid bodies. The parathyroid bodies are composed of epithelial cells, and in structure bear a close resemblance to the anterior lobe of the pituitary body. It has been shown that the removal of the parathyroids from the cat is followed by very serious symptoms, and in two cases out of three death ensued in the course of a few days.

It is claimed on good authority that if complete thyroidectomy be performed and the parathyroids are left, that myxodema will not occur; but if they also are removed, myxodema will occur; again, if the thyroid is not removed but the parathyroids are removed, tetany will occur. Capsules of connected tissue completely separate the parathyroids from the thyroids. Considering their size and situation and value, I am sure we will use more care than ever before when making dissections in this region.

In preparing a patient for operation, the X-ray is said to reduce the size of the gland, at the same time making it more firm. The operation of sympthectomy has not grown in favor but has been almost entirely abandoned in favor of thyroidectomy. So also has the ligation of the thyroid vessels. Just how much of the gland it is necessary to remove depends

upon the individual case, usually at least one-half the gland to the isthmus, and sometimes the lower portion of the remaining side. The anatomy chiefly concerned in the operation, given as briefly as possible, is: the skin and platysma covering the sternohypoid, sternothyroid and omohyoid muscles. The arterial blood supply: from the superior thyroid, a branch of the external carotid. The inferior thyroid from the thyroid axis, and occasionally the thyroidima from the innominate, or from the subclavian or the internal mammary.

The superior thyroid vein drains into the upper and the middle into the lower part of the internal jugular, and the inferior thyroids into the innominate veins.

The anterior jugular commences near the hyoid bone from the union of several superficial veins from the submaxillar region. It passes down between the median line and the interior border of the sterno-mastoid muscle and at the lower part of the neck, passes beneath that muscle to open into the termination of the external jugular or into the subclavian vein. The nerve supply of the gland is from the sympathetic and the muscles are supplied from the loop of communication between the descendens and the communicans hypoglossi.

The motor nerve of the larynx, the recurrent laryngeal, lies in the space between the trachea and esophagus, near the inferior thyroid arteries, and can be avoided by leaving the posterior capsule of the gland, or hugging it very closely.

This hasty anatomical review is given merely as a reminder to the busy practitioner who may not care to look it up more in detail. The veins in this region have very thin walls and must be handled with unusual care.

In approaching the gland after the capsule is opened, the lateral veins should be seen and secured, the gland being carefully lifted up so that every point in the field is plainly visible. If the fingers are placed between the gland and its capsule and the gland hastily delivered, the lateral veins may be torn, and because of their close connection to the venous radicals, the bleeding is profuse. Dr. C. H. Mayo has shown that after the collar incision has been made and the skin and platysma in one piece dissected to a point above the gland, if the muscles covering the gland are to be cut, the section must be high, an inch and a half or two inches above the skin incision, to preserve the nerve supply, and to break the suture line so that the platysma and skin will not be fastened by adhesions into the muscle incision; the skin will thus be left free to glide over the neck as before the operation.

340 Andrus Building.

[Written for the MEDICAL BRIEF.]

Report of a Case of Appendicitis, Pyosalpingitis and Ovaritis, with Adhesions Complicating Pregnancy.

BY GEORGE B. NORBERG, M. D.,
Professor of Gynecology in the University Medical College.
Kansas City, Mo.

I submit the following case, feeling that it merits some interest to both the general practitioner and the surgeon:

Mrs. C., about five feet four inches in height, weight one hundred and eighteen pounds; general appearance, fair; was brought to me in the early part of December, 1905, presenting the following history: Family history negative. Menstruated first time at the age of fourteen. Clerked in a store (being on her feet most of the time) for eleven years. She had none of the diseases of childhood except measles. Suffered greatly with dysmenorrhea from the beginning of her menstrual life until her first pregnancy. She was married at the age of thirty, and gave birth to a boy nine and a half months later. Her gestation period was normal. She expressed her feeling at the time of her first pregnancy by saying: "I felt better than I had for many years previous." Parturition was somewhat tedious, lasting thirty-six hours. She had a bilateral laceration of the cervix uteri and a perineal laceration, which was repaired promptly. She nursed the baby at the breast. Menstruated the tenth and eleventh months. She missed the twelfth month, and had other symptoms of pregnancy, such as nausea, soreness of breasts, etc. She weaned her baby

at this time. The object of her visit to my office was for a supposed pregnancy of about two and one-half months' duration, accompanied by severe pelvic pains, mostly referable to the right side. Constipation was a troublesome complication, no history of an infection could be obtained. She had rather indefinite knowledge of slight chills and some elevation of temperature, but ascribed these to the excruciating pains and nervousness which had almost rendered her an invalid.

On examination I found a capacious vagina, large, soft cervix, uterus retrodisplaced to the right side, connected with and bound down by a mass in that side which was so tender that it was palpated with difficulty. I might say without going into much detail that I was unable to determine whether I had a tubal pregnancy or some old inflammatory trouble in the tube to deal with. I kept her under close observation for about three weeks, and examined her several times. Her suffering increased, and she urged the exploratory operation, which I had advised. The urine analysis prior to the operation showed a small percentage of urea and albumen in considerable quantity. Frequent examinations in the last two months gave an entire absence of albumen, and the amount of urea is somewhat increased. I am unable to account for the disappearance of the albumen.

She was operated upon January 4, 1906, at the University Hospital. The usual median incision just above the pubis was made. On exploring the pelvic cavity the uterus was found to be large and soft (about the size of a three months' pregnancy), lodged behind the promontory of the sacrum, and to the right. The tube and ovary were bound down in one mass of adhesions, and the end of the appendix vermiformis adherent to the same. Near the proximal end of the appendix was a strong adhesive band almost dividing it. The distal end of the appendix was swollen about the size of the little finger, and later, when an examination was made, it was found to contain pus. After doing an appendectomy, the inflamed mass on the right side (containing tube and ovary) was removed. The tube was cut out from the cornu of the uterus, the uterine wound, and the broad ligament dealt with in the usual way. The abdomen was closed without drainage, as no pus had come in contact with peritoneal cavity. On macroscopical examination the tube was found to contain some pus. It was sent to a laboratory, but for some unknown reason was lost. With the exception of the first five or six days following the operation, when she had considerable trouble with flatus in the intestines, the balance of her stay in the hospital was so uneventful that it was scarcely interesting. She went home January 17th, thirteen days after the operation. Until about one month ago she complained very much of gastric disturbance, such as nausea. That has been overcome. She is now in her eighth month of gestation, and in fairly good health, the former distressing symptoms having almost entirely disappeared.

The significant facts in this case are:

1. That it was a surgical case.
2. It was very suggestive of ectopic gestation.
3. The appendicitis and pyosalpinx in this case occurring in conjunction with pregnancy was merely a coincidence.
4. The trouble, no doubt, originated in the appendix, and the colon bacilli gained entrance into the tube through old adhesions formed by a previously existing salpingitis. (This patient gives a history of having had painful menstruation from its beginning until her first pregnancy, which, no doubt, gave rise to extra uterine inflammatory trouble quite susceptible to infection; and the adhesions found were entirely too firm to be of recent formation.)
5. That cases demanding surgical interference can be dealt with without disturbing the existing pregnancy.

NOTE.—This case was reported about one year ago, and since the proof is before me for correction, I might add that she gave birth to a boy July, 1906. I have reports from her physician that her labor was normal, and that she is in the best of health.

Argyle Building.

Inclosed find one dollar. I will soon be seventy, but I love to read the BRIEF.—S. S. ALFORD, M. D., Booth, La.

[Written for the MEDICAL BRIEF.]

General Conditions and Symptoms That Are Helpful in Diagnosis of Tubercular Joints.

BY A. E. BOOTH, M. D.,

Professor of Orthopedia in the Homeopathic Medical College of the University of Minnesota. Minneapolis, Minn.

1. *Insidious Onset.*—The tubercular inflammation is of low grade, and advance is slow unless the infection is mixed.

2. *Periodicity.*—This is observed in the periods of exacerbation and quiescence, lasting weeks or months, as the case may be. Oftentimes the patient during the period of quiescence feeling fairly well.

3. *Family Predisposition.* — This is seen in about twenty. per cent of the cases only. The general build of the patient, nourishment and environment must also be considered.

4. *Symptoms.*—Pain, almost always present to a greater or less degree; sometimes it is present only on motion. It is the cause of the night cry, and the muscular spasm about the involved joint.

Heat.— This means the character of the blood supply of the part, and its intensity will vary with the intensity of inflammation, and so in pure tubercular conditions is not nearly as great as in mixed infections. It is usually present, however, and can be determined by passing the hand from the well to the affected part, and noting the difference in temperature.

Swelling.—This is seen in edema and infiltration of the soft parts and enlargement of the bony parts; is sometimes more apparent than real from the atrophy above and below the affected joint.

Pain on Joint Pressure.—Is elicited by percussion. For example, in knee or hip by striking the heel of the affected extremity, also noticed in the jars in Pott's disease. Sometimes it is present in flexion or motion of the joint, and its absence during extension and fixation denotes synoval rather than bone disease.

Muscular Spasm.—The most important symptom yet. Noted in Pott's disease in the flattened and rigid spine. Observed in the hip, knee and ankle joint in their flexion and fixation. In fact, it is seen in any joint that is inflamed, and is nature's method of fixation for her cure. It is muscular spasm which produces the lumbosacral curve, so-called in hip disease when the patient is placed upon his back on a plane surface, and an attempt made to completely extend both thighs. In hip-joint disease it is relaxation of this muscular spasm which is the cause of the night cry. The muscles controlling the diseased joint becoming relaxed during sleep, permit slight motion, and this, in turn, pain, which is only to be increased by the muscular spasm it renews, bringing the parts sharply in contact.

Limited Motion.—This is double, caused first by spasm of the muscles controlling the joint, and, second, by infiltration in the soft parts of the joint.

It is seen where there is actual change in the contour of the parts, as seen in the angular spine of Pott's disease, in the fixation of almost any joint that is involved, and in particular is it of value in hip-joint disease, where almost never can we obtain abduction of the thigh on the affected side.

Atrophy.—The result of disuse and poor circulation is one of the later symptoms, sometimes more apparent than real, from the enlargement of the joint in question, but it is almost always present to a greater or less degree. We see it in hip joint disease in the wasted gluteal muscles. In disease of the knee both thigh and calf are involved, and is seen in most cases of long duration.

Deformity.—Here again we have muscular spasm, and actual fixation in the parts is accountable. For example, in the knee muscular spasm causes flexion, actual displacement of the tibia backwards, while at the same time change in contour of the condyles of the femur takes place, and the deformity is thus made worse. In Pott's disease we see it in the kyphos, and in hip-joint disease atrophy, flexion, rotation, etc.

Abscess.—This is a late manifestation and the case should not go to that point without diagnosis. Its presence, however, added to the above conditions, helps in diagnosis.

These are conditions and symptoms which can be applied to any joint in the

body; in their presence a diagnosis of tubercular disease may be made with reasonable assurance with very few exceptions, which can usually be differentiated with ease.

In virulent cases where muscular spasm is marked, or the symptoms severe, relief by traction usually means tubercular disease; non-relief means, probably, osteomyelitis.

Andrus Building.

[Written for the MEDICAL BRIEF.]

Tuberculosis.

BY D. A. RICHARDSON, M. D.,

Professor of Chemistry and Toxicology in the Denver Homeopathic Medical College.
Denver, Colo.

Tuberculosis is an intensely contagious disease, acquired in various ways, never hereditary, runs a definite course, of pronounced characteristic symptoms, readily amenable to treatment, and in a great many instances subject to spontaneous cure.

If a mother subject to tuberculosis be sequestered from her children as soon as they are born, even in the presence of so-called predisposing tendencies, they may live to old age entirely free of the disease, never having been subjected to an infection.

In the consideration of its pathology, tuberculosis is of two varieties. The infection may take place upon the mucous membrane by way of the lymphatic system, by way of the ear or the nose or the mouth, to the cervical glandular system. Second, by the ingestion of the bacillus. The tubercle bacillus, which is the factor in all pathological changes in tuberculosis, is distributed through the economy by way of the arterial or venous systems, or through the stomach or intestinal tract. We will consider pulmonary tuberculosis in this paper.

It is not impossible that pulmonary tuberculosis should be of the miliary variety. The predisposing causes are long neck, flat chest and sloping shoulders.

The primary cause, is of course, the tubercle bacilli. The mechanical predisposing causes are the anatomical features just mentioned; these cause a mechanical functional inactivity which promotes the formation of tubercular tissue in this region (the apices).

The miliary form of tuberculosis follows the ingestion of the bacilli. One must recognize the fact that in a well-nourished person the bacilli themselves are the weaker factor; not every person who swallows tubercle bacilli, or infected chicken's livers, would suffer from miliary tuberculosis, but if the resisting power of the person is so depleted as to permit of the admission of the bacilli to the lymphatic system through the mesenteric machinery, miliary tuberculosis is sure to follow. Again we see that the lymphatic system is the main point of entrance. When the tubercle bacillus reaches that environment in which it may best survive, tubercular tissue forms and the destructive process begins. The destructive process is consumption. The process itself is tubercular, and this, to my mind, is the one distinguishing point between tuberculosis and consumption. The process may be extended from one or a large number of foci, such extensions, however, being subject to acute infections; thus we have, during seven years or more, many acute attacks or acute infections.

Pulmonary tuberculosis pure and simple closely resembles an ordinary lobar pneumonia. Its pathology is identical, both are characterized by cavity formation with pus and fibulated fibrin, both terminate in resolution.

The first positive symptom of an infection of tuberculosis is pain in the lung. It is not a pleuritic pain. This pain is at the site of the first infection, and is commonly mistaken for an attack of pleurisy. Auto-intoxication, and the first beginnings of degenerative process, accompanied by physiological phenomena of inflammation, and poisoning take place, with chill, fever, etc. The effort of the economy to get rid of these foreign bodies results in cough, at first dry, and later on mucopurulent, accompanied by more or less emaciation, weakness, loss of appetite, and, as the process extends, restriction of respiration on the affected side. As the tubercular process advances many chemical changes take place in remote parts of the body, notably the removal of calcium compounds from the bones, and

I believe the prolonged malaise of tubercular patients is due in the largest measure to this chemical change, or others which are similar, as the marked increase or diminution of sulphates and chlorides which would be noted at this time is caused by failure on the part of the economy to eliminate the normal amount of chlorides, and we have presented a chain of symptoms corresponding to the administration of sodium chloride in large amounts, according to the law of similars.

The tubercular process ceases when the infected area has been freed of the bacilli. The term general tuberculosis indicates an extensive infection; but tuberculosis tends to localize itself, hence we never have an acute general tuberculosis. It would seem that the tubercle bacillus, in its migrations or in its extension of environment, seeks to localize itself, and also seeks to confine itself in its latest environment. I have seen at autopsy the mediastinal glands a calcareous mass of tubercular tissue.

The results of tuberculosis are more serious in so far as the patient's comfort and well-being are concerned than is tuberculosis itself, and the chief pathology is resultant and not causative of the disease. I believe tuberculosis will one day be more amenable to treatment, and more easily cured than is diphtheria today.

2200 Williams Street.

[Written for the MEDICAL BRIEF.]

Pyothorax, Its Management, Etc.

BY A. DAVID WILLMOTH, M. D.,

Professor Surgery and Clinical Surgery Medical Department, Kentucky University. Louisville, Ky.

There is possibly no more interesting subject to the practitioner and surgeon than empyema. When we consider the large number of cases which follow croupous pneumonia, the interest of this subject to the general practitioner is understood. After the patient has been successfully carried through an attack of pneumonia, the surgeon is, in many cases, called to relieve a complication that is often more serious than the pneumonia itself.

Cases following pneumonia, where the infection is purely a pneumococcus, usually terminate favorably and leave few after-effects. It is a very fortunate case, indeed, where the accumulation in the pleura remains fibrinous or sero-fibrinous, and the patient is fortunate and the cases rare where the infection is purely pneumococcic, for there is constantly circulating in the blood and lymph streams both staphylococcic and streptococcic, particularly the first variety, and those find their way into the pabulum furnished them by the accumulation of serum in the pleural cavity, and they at once find a most excellent field for their activity.

If the patient is so fortunate, as stated above, to have only a penumococci infection, and the accumulation is small, it may often be cared for by nature; however, most cases of this variety will require surgical interference, if nothing more than a paracentesis, removing the pus in a mechanical way. The number of cases that recover after simple paracentesis is rather large, considering how many have an accumulation in the pleural sac. Drainage can be maintained by the introduction of a tube. This tube can either be of rubber, or what has served a most valuable purpose in my hands, a gutta percha tracheotomy tube, just long enough to reach inside the sac and fitting snugly against the side, and maintained in place by adhesives. Or, if a number of aspirations have been made, nature is then able to care for the remainder, and, finally, the patient makes a fairly successful recovery.

Unfortunately, in a large number of cases these simpler methods have been tried before the surgeon is called in, and he has more often to deal with a true pyothorax as the result of infection, most often by the staphylococci. In all such cases, whether of infection following pneumonias or through those following trauma, a more radical operation must be done.

The simplest measure which will be necessary in these cases will be an incision over the rib that will permit the surgeon to resect a small portion to allow for drainage, and through this he must maintain drainage for a number of days. This operation is, usually, sufficient, and

the surgeon is required to do no more. If, however, the case is one of infection following trauma, where the pleura has been wounded, and a direct infection has occurred, either into small amounts of serum or into the blood clot that has accumulated in the sac, there is usually more required than the above operation. Resection in these cases should be larger than in the other variety, for the drainage must be maintained for a longer period. The first thing to be determined is whether we are dealing with pus in the sac. If the case be seen by the surgeon at the start he can easily determine this by a simple hypodermic syringe. The patient, of course, has fever, elevation of the pulse, and these, with the history of the case, makes diagnosis comparatively easy. The next question is as to the size of the cavity that he is dealing with, whether it has been walled off, or whether it involves not only the sac, but the lung itself. This can only be determined at the operating table, and where the surgeon has opened up the pleural sac and is dealing with large amounts of pus, after he has taken precautions to allow it to escape slowly, to prevent the detrimental effects that would follow the evacuation of large amounts of fluid from any of the cavities. He should then inspect the cavity with a finger or sound of some variety to determine the size of the sac that he is dealing with. If it is walled off and is not too large, and is an acute case, irrigation with an antiseptic saline, such as the normal saline solution or boric acid, will gradually close up the sac, and the drainage that escapes from time to time will gradually grow less and less, until finally the sac is closed by the parietal and costal layers of the pleura becoming adherent. This is the simplest manner in which the damage can be repaired, and is far better than to allow the pus to remain in the sac, no matter how small the amount.

In some cases, where resection of the rib has been done and drainage maintained, the sac still refuses to close. The case has, perhaps, been allowed to go on until the patient is emaciated from the suppurative condition and the constant drain of the system, to say nothing of a possible secondary infection of the tubercle bacilli in the lung tissue. The surgeon should, therefore, interfere in the case just as early as he is assured that nature will not be able to close the sac; he then must aid her by bringing the two layers of the pleura together, where the pulmonary layer can not expand and reach the costal layer. In other words, the Estlander operation, or a modification of it, must be done. He must determine in his mind the size of the sac that nature is contending with, and then must resect enough ribs to allow the layers of the pleura to come together. Personally, I am partial to the U-shaped incision, which allows the surgeon to have ready access to as many ribs as he finds necessary to remove. The slight amount of hemorrhage that occurs in the elevation of the flap is usually easy to control, unless accidentally the costal artery is opened. If this artery be opened during the removal of the flap, or in the removal of the periosteum from the ribs, it is easily controlled by resecting the area along which the artery runs, and then dealing with the artery direct. After the hemorrhage has been controlled the surgeon should begin the resection of the ribs, and he should always be sure that he removes as many ribs as over-lie the cavity beneath. It is far better for him to remove one rib too many than to allow one to remain which holds the pleura slightly above the layer beneath, for if this happens the efforts at closing the sac will be thwarted; the two layers of the pleura still remaining separate at this point, and a small cavity remaining, which will constantly secrete more or less material, and the brilliant operation that was done at the table will fail to be a complete success. After the ribs have been removed the question to determine is whether or not the costal layer of the pleura is to remain or to be removed. If it is purely a pyogenic infection the pleura should be allowed to remain. On the other hand, if it is a case where tubercular infection has become engrafted with the pyogenic, and the costal layer shows the tubercular nodules, it is then best to remove all that is involved, and to cover the layer beneath with the flap that has been elevated.

While this may seem a radical operation, yet it offers a hope, and a very great

hope to a class of cases that are more or less hopeless unless relieved in this manner.

There is still another class with accumulation in the pleural cavity, and concerning which there is some question regarding the treatment to be instituted by the surgeon. I mean those cases of tuberculosis in which there is an accumulation in the pleural sac that interferes with the patient's breathing, and is more or less a menace to life. I can see no reason why an accumulation in this class of cases should not be dealt with as in the acute form, believing that even the accumulation is, in a way, not highly toxic; that where it is removed aseptically, you relieve the patient by ridding him of material that nature can not care for herself. So, even in those cases of pulmonary accumulation, I would still favor the resection of one rib, at least, and a thorough drainage of the cavity, believing that the patient can not fail to be benefited by the operation.

101 East Chestnut Street.

[Written for the MEDICAL BRIEF.]

Vital Activity of Cell Life.

BY WILLIAM L. WARRINER, M. D.,
Professor of Physiology in the Kansas Medical College.
Topeka, Kan.

Herbert Spencer defines life as a continuous adjustment of internal relations to external relations. All processes of the body are vital, to be explained along natural phenomena, like chemical and physical processes. Life is maintained, I believe, by special vital activity of the cells. While little has been written on this subject, I think it is pretty thoroughly agreed that certain processes can only be explained through vital activity of the cells of the body.

It is not too much, perhaps, to say that the cells of the alimentary and digestive tracts have a mind, a consciousness, in their method of selection, retaining what is needful for the support of the body and eliminating all waste products. The whole process of digestion hinges upon the special vital activity of the cells in physiological secretion and excretion. I believe that by natural selection nourishment passes from the system to the blood and through the blood to the lymphatic system, where it is assimilated by the tissues. The food is not merely ground up into a soft pulpy mass and digested, but passes through the alimentary tract, and by the vital action of the cells lining that tract, such portions are selected as are needed by the economy.

This is certainly true of the cells of secretion, and why not those of excretion? For instance, if you examine the cells in the glands of the stomach, they will appear identical in structure, both anatomically and histologically, yet part of them are secreting pepsin, part rennin, etc., etc., showing the power of selection there. In other words, a physiological selection is going on at all times. Necessary juices are secreted, differing in quality, yet the cells are practically alike.

The juices of the stomach are secreted in the same way, by natural selection, through vital activity of the cells. Gastric juice, saliva, tears, in fact, all secretions of the body, are manufactured through the vital activity of the cells. Lymph is probably formed in the same way, by the selective action of the cells lining the blood vessels.

In the digestive tract, we have the selection of certain classes of foods, and their absorption, and this selection can not be explained by osmosis; as a proof that absorption is performed in this way, we know that in ordinary osmosis, albumen is not diffusible, but in this process of absorption through the cells, it is readily diffusible.

All through the processes of life there is a physiological selection going on, and the cessation of this unconscious selection in any portion of the body is followed by disease. For instance, excretion, which is carried on through the same vital activity, ceases, in the kidneys; the cells are destroyed and the destruction of them we call nephritis or Bright's disease. The products are no longer retained by the activity of the cells and we find in the urine sugar, albumen, etc. This subject is one of vital interest and at present very little understood, or rather, I should say, not very clearly explained.

913 Kansas Avenue.

[Written for the MEDICAL BRIEF.]

A Note on the Relation of Valvular Lesions of the Heart to Life Insurance.

BY ALLISON MAXWELL, A. M., M. D.,

Professor of Clinical Medicine and Diseases of the Chest in the State College of Physicians and Surgeons; Medical Director of the State Life Insurance Company of Indianapolis. Indianapolis, Ind.

Most of the life insurance companies as a rule will accept a man for insurance with a purely functional heart murmur, provided he is in good health and his personal and family history are good. Some companies will accept a man for life insurance with an organic heart murmur, with some hypertrophy of the heart, if there is proper compensation and the personal and family history are good. However, the insurance granted to such an applicant is not excessive and is of the ten, fifteen or twenty-year endowment type usually, because he is regarded as an impaired risk.

Frequently the lesion which is most common is mitral regurgitation, and of all valvular heart lesions this is the least harmful. Applicants suffering from this form of lesion are more likely to live out their life expectancy than with any other form of valvular trouble.

This last statement must be qualified:

1. By the man's occupation. If this is a quiet vocation, without mental excitement or undue muscular exertion, he may be an acceptable risk.

Again, a man fifty years old, with mitral regurgitation, or any other heart murmur, can hardly be acceptable because of his age. While one twenty-five years old might be acceptable on the twenty-year endowment plan, or with a lien upon the policy.

A man with good past habits, who has a heart murmur, may be a fair risk for insurance, while a man with similar lesion, who drinks or who dissipates in other ways, will shorten his life and be undesirable.

A man with an aortic regurgitation, I do not think would be an acceptable risk on any plan, for he may die suddenly, although Babcock states that when this is due to endocarditis, if compensatory hypertrophy has occurred the disease may be borne for many years; but when compensation begins to fail in aortic regurgitation, it is doubtful if it can ever be restored as in mitral regurgitation.

Of course, any disease complicating valvular trouble, as Bright's disease, or affections of other vital organs, would make a risk very undesirable.

However, write as much as we will, and deliberate as much as we may upon these cases of valvular lesions of the heart, it is probable the exception rather than the rule that life insurance companies will take as acceptable risks on endowment or any other form, those applicants who have an organic heart murmur.

323 North Delaware Street.

[Written for the MEDICAL BRIEF.]

Diseases of the Breast.

BY ALFRED DE ROULET, B. S., M. D.,

Chicago, Ill.

Formerly Professor of Surgery and Diseases of Women in the Medical Department of Trinity University.

II. THE PATHOLOGICAL HYPERTROPHIES.

Diffuse virginal hypertrophy of the breast is a comparatively rare, though frequently described, condition. It occurs most frequently in women from fifteen to thirty years of age. The onset is insidious and the development slow. As a rule, the growth is unaccompanied by pain, although tenderness may be present. Both breasts are usually affected, but not necessarily to the same degree. The enlargement is due to a uniform overgrowth of all the tissues rather than the excessive development of any one particular element.

As the breast enlarges it projects sharply from the chest wall, presenting an appearance similar to that of the developing breast of a woman pregnant for the first time. As the growth continues the breasts become pendulous, the superficial veins become dilated, the areola enlarges, but the nipple becomes less prominent, not from atrophy, but on account of the disproportionate development of the surrounding tissues. As a rule, the skin remains perfectly normal and free from adhesions to the underlying

structures. In cases where the enlargement is extreme, the more dependant portions of the breast may be more or less edematous.

Fig. 1. Diffuse Virginal Hypertrophy of Breast

Aside from the deformity incident to the condition, the enlarged breasts may cause considerable annoyance and discomfort on account of their size and weight. When the hypertrophy is excessive, respiratory difficulties may be expected.

The diagnosis is based on the gradual uniform enlargement of both breasts, with complete absence of skin or lymphatic involvement. Inflammatory symptoms are never present. On palpation the sensation is that of normal breast tissue, no thickened or indurated areas being perceptible. The manipulation incident to an examination ordinarily occasions neither pain nor discomfort.

In the two cases which I have seen, the first, a rather slender German girl of nineteen presented the following history: When fifteen years old both breasts began to enlarge, the growth being rather more rapid on the left side. During the first few months the development was quite rapid, then continued rather more slowly until she was seventeen, since when there has been no noticeable enlargement. At no time has she suffered from pain, and at no time has her general health been affected in the slightest degree. She has never had any menstrual disorder of any kind, and the pelvic organs at the time of examination were apparently in excellent condition. The second case was that of a young Jewess, twenty-four years old and unmarried. While both breasts were affected, the right was considerably larger than the left. The breasts were firm and elastic in consistence, but distinctively sensitive to pressure. The patient stated that neuralgic pains in the breast were of comparatively frequent occurrence. In this patient menstruation was irregular, occurring at intervals of from three to five weeks, the flow lasting seven or eight days, and accompanied by considerable pain. No abnormality of the pelvic organs could be detected, however. In both cases the treatment was limited to palliative measures, and the results were about as expected.

Senile parenchymatous hypertrophy of the breast has long been recognized by

Fig. 2. Diffuse Virginal Hypertrophy of Breast

surgeons and pathologists and has been repeatedly described under a vast medley of names, as cystic disease of the breast (Bryant), hydatids of the breast

(Cooper), intra-acinous cystic epithelioma (Reclus), chronic cirrhosing mastitis (Billroth), periductal mastitis (Delbet), chronic cystic mastitis (Koenig), cystadenoma (Schimmelbusch), senile atypical parenchymatous hypertrophy (Bloodgood), abnormal involution (Warren), fibrous and glandular hyperplasia with retention cysts (Whitney), etc. This confusion in nomenclature may be reasonably attributed to the varying gross and microscopic appearances of the condition at different stages of its growth or development.

The disease is distinctively one of the senile or declining breast, and is observed most frequently between the ages of forty and fifty. In Greenough and Hartwell's analysis of thirty cases, the youngest patient in this series was twenty-five years old, the oldest fifty-two, the mean age forty and four-tenths years. This shows the age incidence to be a trifle lower than the age at which menopause is commonly expected. Occurring as it does at the age when cancer is most frequent, it is of the greatest importance to differentiate the two conditions.

As to the exact nature of the pathological changes, it should be remembered that a certain amount of cyst formation occurs normally, as a result of the obstruction of the ducts and acini during the involution of the senile breast, but the line where the physiological process stops and the pathological begins, is by no means clearly defined. Inasmuch as the mammary epithelium is notoriously a tissue of unstable equilibrium, the cystic changes just mentioned often lead to a secondary epithelial proliferation which, in the majority of cases, does not go beyond the stage of hyperplasia, but which may, and in certain cases does, go on to cancer formation. The pathological process is essentially hyperplastic in character, rather than inflammatory or neoplastic. It must not be forgotten, however, that while the disease in its early stages is perfectly benign, in the late stages at least one case in every ten becomes malignant.

The clinical picture of senile parenchymatous hypertrophy may be summarized briefly as follows: An irregular indurated mass with vaguely defined margins is found either diffusely involving the entire mammary gland, or more or less definitely localized in some particular portion. In some cases an irregular "corded" feeling of the gland, with scattered indurated spots or nodules, is all that can be detected on palpation. When the disease is localized, the indurated area is most frequently found in the outer hemisphere of the breast, and is found occasionally in the lower hemisphere and in the region of the nipple. The inner hemisphere, and especially the inner upper quadrant, is rarely the seat of the localized process. Either or both breasts may be affected, the condition being bilateral in rather more than half of all cases. Cysts are frequently observed and may be of considerable size. When cysts of any size are

Fig. 3. Senile Parenchymatous Hypertrophy of Breast.

present, the borders of the indurated areas are much more sharply defined than they would be otherwise. The mass is ordinarily of very slow growth, except when large cysts are present, when the development may be quite rapid. Adhesions of the mass to either the skin or the fascia do not occur, and the axillary and supraclavicular lymph glands are not involved. In a few cases, a watery discharge from the nipple, followed by a temporary diminution in the size of the tumor has been noted. In the cases where this occurs, the enlargement is usually situated immediately beneath the nipple, and it is possible that the discharge depends more on the location of the cyst than upon its character.

The prognosis in any given case of this disease when untreated is a matter of great uncertainty. The disease may advance to a certain stage and then remain quiescent indefinitely. Suppuration of the cysts is ocasionally observed, and in very rare instances, the induration has subsided spontaneously. Cancer develops in from ten to twelve per cent of all cases.

The line of treatment indicated in these cases is clear. In every case complete removal of the mass is indicated not only on account of the tendency of the growth to become cancerous, but because its presence may conceal or mask the development of an entirely independent malignant disease. In cases where the indurated area is small and the presence of well defined cysts renders the diagnosis certain, delay in operating may be excused, but extension of the process imperatively demands immediate operation. The operation most suitable for this condition is the subcutaneous resection of the mammary gland, the technique of which will be considered in a subsequent paper. Should there be any evidence of malignant degeneration, the radical operation should be performed in the same manner as for any other breast cancer.

In any case, after operation, the patient should be examined by the surgeon at gradually lengthening intervals, for a period of at least three years, to insure the early detection of a possible recurrence.

1012 Venetian Building.

[Written for the MEDICAL BRIEF.]

The Treatment of Rheumatic Conditions.

BY J. W. HIGGINS, M. D.,

Professor of Pediatrics in the Denver Gross Medical College. Denver, Colo.

The treatment of rheumatic subjects involves a study of the individual, climate, environment, occupation, and more especially the diet. Aside from medicinal treatment, it should always be remembered that the general system of the subject of any of the forms of rheumatism is overtaxed. This applies especially to the liver, kidneys and lymphatic system, which are suffering from engorgement. The channels of elimination being obstructed, our first object should be to stimulate secretion and open up the avenues of escape.

The intestinal tract, the laboratory for the manufacture of toxins, is many times responsible for the development of an attack. In evidence of this there is the presence of indican in the urine, which is proof of septic decomposition in the intestinal canal.

To Dr. W. H. Porter, of New York, is due much of the credit for so forcibly calling our attention to the importance of recognizing this condition. The rheumatic condition is but one of the many phenomena arising from a disturbed nutrition from auto-intoxication, having their source in the digestive system, and any treatment that does not recognize a disturbed condition of the digestive system must meet with failure.

In the way of medication, one of the most efficient drugs is calomel, given in liberal doses of from one-half to five grains, combined with some active cathartic, as compound extract of colocynth, to stimulate peristalsis. The salicylates may be given in varying doses of from five to ten or fifteen grains for the first twenty-four to forty-eight hours, until the temperature has been controlled, which is an evidence of the removal of the septic material and the stoppage of its manufacture. Hepatic stimulants and tonics, and a careful supervision of the diet, giving only foods that tax the digestion the least and at the same time contribute the most to the general nutrition. For the

first, strychnia, given in doses of from one-thirtieth to one-twentieth of a grain every four to six hours, to stimulate circulation and aid elimination and tone up the nervous system. Caffeine, by dilating the arterioles, aids greatly toward elimination, and is one of the most efficient remedies. It may be given in doses of from one to three grains every four to six hours.

The diet should be regulated according to the needs of the system, and the capacity of the digestive organs. Among the foods best adapted to this condition are, first, meats, eggs, milk, white bread, butter; in fact, good, plain, easily-digested foods, excluding all sweets, fruits, dressing and any foods that have a tendency to overtax the digestion, especially the small intestines. The amount of food given to be regulated by the capacity for assimilation.

California Building.

[Written for the MEDICAL BRIEF.]

Early Recognition of Orthopedic Deformities.

BY J. W. STEVENSON, M. D.,
Surgeon in Charge of the United States Marine Hospital.
Cincinnati, O.

There are few deformities which we can not prevent if the case is seen early enough. The majority of the deformities of childhood are seen at birth. Congenital club foot, diseases of the spine, bow-legs, knock-knees, occur soon after birth and are first seen by the family physician. It is he who is responsible if the child does not early receive proper treatment. Hip joint disease occurs later in life. There should never be a club foot, a hump back nor bow-legs nor knock-knees. All these conditions respond promptly to early and proper treatment. In hip joint disease the child is born with a tubercular joint. Pain and crying are the first symptoms, which are too often neglected. The child limps, perhaps he falls, and not infrequently the family physician will pronounce the pains to be rheumatic. After futile treatment, an abscess of the joint has formed and the mischief is done, and a radical operation is imperative.

The family physician is the man who has it in his power to prevent practically all the deformities of mankind. And until he is willing to recognize his shortcomings and refer his little patients to the proper specialist, just so long will we see such deformities. The early recognition of orthopedic cases is the one important feature. When a child complains of pain in his leg or back, and cries almost continually, it is the business of the family physician to discover the cause. There is something radically wrong with such a child. If treatment is delayed until the deformity is well advanced and the condition becomes chronic, the specialist is at a disadvantage when the patient finally reaches him. In my practice I can recall case after case which might have been cured in the early stages, but who came under my notice after many years of suffering and deformity. One such case will suffice for illustration:

A little girl, eleven years of age, was referred to me for treatment. She had congenital club foot, and was treated by the family physician until six months ago. This physician pronounced her condition paralysis, and when she was old enough to walk fitted her with a heavy steel brace, which she had worn constantly for eleven years, the last brace she wore weighing at least twelve pounds. When she came under my care I instituted the plaster of paris treatment, and at the end of six months she is able to wear a shoe, walks perfectly flat-footed, and the braces worn for eleven years are completely discarded. She walks perfectly well, and now only suffers from the atrophy of the muscles from the long disuse of the leg while wearing braces. The only essential difference between the shoe she wears and the ordinary one, is that the shoe is built up a little on the outside. From the present appearance of her foot and her gait no one would suspect a former case of club foot. Every bit of the suffering and inconvenience endured by this child could have been avoided if the practitioner who had attended her from birth had advised proper treatment.

Much has been said and written on this subject, but it is not until the practitioner is generous enough, and human enough, to know when he is not curing a disease, and to send the little patient to a specialist, that we shall hear the last of it.

United States Marine Hospital.

[Written for the MEDICAL BRIEF.]

La Grippe.

BY W. S. GIBBS, M. D.,

Professor of Principles and Practice of Medicine and Clinical Medicine in the College of Medicine of University of Nebraska.
Omaha, Neb.

La grippe, or, as it is sometimes called, the influenza, has been in our midst for the past seventeen years, making its appearance here as an endemic disease after having encircled the globe; appearing first in Bokhara, extending over Asia and all Europe, traveling across the Atlantic, and commencing its ravages in America. It rapidly spread over this country, attacking thousands upon thousands. The disease is caused by the bacillus of Pfeiffer, and is the primary factor in the production of innumerable conditions. We have no means whatever of checking its onset, and we are as absolutely helpless to prevent its visits. I regard it as the most important of all infectious diseases, not excepting tuberculosis or rheumatism. There is no tissue, organ or fluid of the body that may not be infested by this germ. It has been found in the blood and all the tissues, in the mucous membrane, and in the nerve structures.

So far-reaching has been its influence that I think I am safe in saying that it has caused a greater variety of disease, more varied in their action, than all other infections combined.

When we consider that its effect on the nervous system is such as to cause violent insanity; a physical prostration that requires our best efforts to overcome, an extremely high or a subnormal temperature, it seems to me that the importance of this disease should be more thoroughly appreciated. And the physician as the conservator of the health of the people, should feel the responsibility of enlightening the laity.

Too often la grippe is regarded as a mere cold, until followed by complications which render it fatal. Physicians seem to tire of pronouncing the name of this disease, and prefer to call the case one of pneumonia, bronchitis, rheumatism, pleuritis, or gastro-enteritis, when it is really la grippe, and if treated accordingly, the patient would be saved serious trouble.

One of the commoner symptoms of la grippe is pain, followed by swelling, although some of our best authors contradict this statement. I recall two cases illustrating the importance of diagnosing this symptom. A child five years old was suffering with a swollen arm; very painful. Temperature 105°. There were no other pathological conditions outside of the pain, fever and swelling. I diagnosed the condition as la grippe with muscular inflammation. The administration of appropriate remedies relieved the little patient in a few hours, and in twenty-four hours the inflammation had practically disappeared. Despite the view of some well known authors on this subject, I believe that many cases show swelling and inflammation of tissue, and in some instances peri-articular.

I recall one case, that of a young lady who had been treated for weeks in the hospital for what the physician called rheumatism of the ankle. She had continuous fever with great prostration. Investigation of the case revealed the fact that the inflammation was caused by the bacillus of Pfeiffer. She was treated accordingly, and recovered in a week after having been treated for rheumatism several weeks.

There is no question but that the pneumonia produced by the bacillus of Pfeiffer is not only different from that produced by the pneumo-coccus, but requires entirely different treatment. I have seen many cases of gastritis, even when treated by the best methods, fail to respond, because of the non-recognition of the presence of la grippe. I have seen these cases promptly respond when the proper remedies for la grippe were employed. This applies to nervous conditions induced by la grippe, insomnia, somnolence, etc. Treated directly without taking the underlying cause (la grippe), into consideration, there can be no improvement. Grippe is not a self-limited disease, unless limited by death.

I should like to call attention to the importance of early diagnosis of la grippe in puerperal women. I have seen four such cases, and they were all serious. It

is imperative to make a prompt diagnosis between la grippe and septicemia.

The patient suffering from la grippe should be put to bed, in a warm, well-ventilated room. I believe that ventilation is more essential in this disease than in any other. In a hospital these cases should be isolated, if possible. Liquid food and warm drinks may be administered every two hours, except, perhaps, at night, when some of the feedings may be omitted.

There is no specific in the way of medication, and each case requires individual treatment. I think it a good plan to administer calomel, about one grain, with some saline, every four hours, until the bowels are thoroughly evacuated. Even if there is gastro-enteric trouble I believe the calomel is still useful.

Quinine is an important part of our treatment in la grippe. In most cases it is best administered in three-grain doses every three or four hours. In many cases I prescribe strychnine, and often digitalis. the former as a tonic, and not as a curative agent. In cases where the temperature is subnormal or low, I often administer asafetida every three hours, keeping up the strychnine and digitalis. The aromatic spirits of ammonia is useful as a stimulant and expectorant.

I regard the coal-tar products as very useful in this disease. Salol is good.

202 Brown Block.

[Written for the MEDICAL BRIEF.]

Artificial Respiration.

BY J. HARVIE DEW, M. D.,

Fellow of the Academy of Medicine; Member of the Medical Society of the County of New York; County Medical Association; Alumni Association of the Charity Hospital; Physicians' Mutual Aid Association, Etc., Etc. New York City.

The subject of artificial respiration in asphyxiated conditions, has received but little attention within the past few years, and yet it is one of great importance whenever an emergency arises requiring its use.

The old Sylvester method still stands at the head of the list, for the simple reason that it is known to every physician; it is probably the most ready and available method which can be promptly resorted to in adult asphyxias from almost any cause. And at one time it was regarded as the best method in cases of asphyxia neonatorum. But where the physician is called upon to use any special method once in the adult, the obstetrician will have occasion many many times in cases occurring at childbirth.

Nearly all of the works on obstetrics that have been published within the past decade have advocated Schultze's method as the most reliable, and have described it in detail. This, I believe, is entirely due to the fact that authors are not thoroughly familiar with the practical use of the newer "Dew's Method."

On March 11, 1893, I published an article in the New York *Medical Record* which had been read before the Academy of Medicine, "Establishing a New Method," etc., which I had devised as far as I knew, and practiced, as had many of my professional friends, since 1870. This has been called "Dew's Method." It possesses far greater utility and many advantages over any other method thus far proposed.

There is not a desirable feature in the Schultze method that is not provided for in this, and all of the objectionable ones are completely overcome, while at the same time it possesses many practical advantages which the Schultze method can not supply.

My directions for practicing this method are: First, to blow up the lungs by a mouth-to-mouth inflation and then to grasp the infant with the left hand, allowing the neck to rest between the thumb and forefinger, the head falling far over backward, straightening the mouth with the larynx and trachea, thereby serving to raise and hold open the epiglottis, the upper portion of the back and scapula resting in the palm of the hand, the other three fingers to be inserted in the axilla of the baby's left arm, raising it upward and outward.

Then with the right hand, if the body is large and heavy, grasp the knees in such a way as to hold them with the right knee resting between the thumb and forefinger, the left between the fore and middle fingers. This position will allow the back of the thighs to rest in the palm of the operator's hand. If the infant is small and

light it will be found more convenient and easier to hold it in the same way by the ankles instead of the knees, allowing the calves instead of the thighs to rest in the palm of the hand.

The next step is to depress the pelvis and lower extremities so as to allow the abdominal organs to drag the diaphragm downward, and work the left hand to gently bend the dorsal region of the spine backward; this enlarges the thoracic cavity and produces inspiration.

Then to excite expiration, reverse the movement bringing the head, shoulders and chest forward, closing the ribs upon each other, and at the same moment bring forward the thighs, resting them upon the abdomen. This movement arches the lumbar region backwards, and so bends the child upon itself as to crowd together the contents of the thoracic and abdominal cavities, resulting in a most complete and forcible expiration. (For figures illustrating see New York *Medical Record* of March 11, 1893.)

While the movements in this method are powerful ones, the operator can, by his manipulations, perform them without shock, and render them as gentle as he pleases. This it is quite impossible for him to do in performing the Schultze method.

Every obstetrician will find that by far the most frequent cases of suspended animation are not extreme cases of asphyxia, and yet when the infant has failed to breathe, and does not respond to the ready methods of excitation, such as spanking, rolling from side to side, sprinkling water upon it, etc., the use of some form of artificial respiration will be of the greatest assistance.

Under such circumstances I at once clean the mouth, inflate the lungs, and use my method, with most prompt and satisfactory results.

The advantages of this method are: That it is most efficient in all cases where artificial respiration, in asphyxia neonatorum, is indicated.

That its movements are easy and can be quickly resorted to at any moment, and anywhere.

That while its inspiratory movements will be found, by experience, to be as efficient as that of any other method, the expiratory movement is far more complete and satisfactory than any of them.

That nearly, if not all of the air drawn in can be expelled. This is most important.

That owing to the force, and at the same time to the absolute control which the operator has over the expiratory movement, he is able to compress the contents of the thoracic cavity to just exactly that degree deemed by him wisest and best, thereby favoring not only the respiratory process, but the proper emptying of the heart and large blood vessels, which can only be forward and in the right direction, thus most advantageously favoring, improving and hastening the general circulation.

That the method can be employed before the cord is cut, when it seems important to save as much blood as possible to the infant.

That, if thought best, the movements can be kept up while the infant is immersed up to its chin in hot water.

That by elevating the buttocks and depressing the head and shoulders, the expulsion of mucus can be effected as in the Schultze method.

That for alternating with other methods it possesses peculiar advantages affording great relief to tiresome positions in protracted cases.

That it possesses all of the advantages of the Schultze method and none of its disadvantages.

Finally, that the method is prompt, reliable, easy to perform, and perfectly safe.

65 West Sixty-Eighth Street.

[Written for the MEDICAL BRIEF.]

Some Unrecognized Forms of Neurasthenia.

BY LINCOLN GRAY TAYLOR, M. D.,

Professor of Neurology in the Medical Department of the University of Kansas.

Kansas City, Mo.

These cases are not recognized usually by the attending physician, for the reason that they are almost symptomless. No particular symptom or set of symptoms may accompany the condition, except, perhaps, a mild prostration, which may be mistaken at a casual glance. A diagnosis is reached rather through the history of

the patients, watching them a few days, etc. It is generally a history of overwork, weariness, etc., which is given the attending physician. One case may exhibit a definite set of symptoms, another may be entirely different or practically without symptoms. The two cases following are quoted as good examples of this alarmingly frequent condition—which is too often overlooked and wrongly treated.

I was called to see a young woman suffering from prostration, headache, loss of appetite, and who claimed to be too ill to leave her bed. She gave the following history: For the past three months she had been complaining of feeling badly, and unable to attend to her duties as bookkeeper in a downtown office. She grew better, then worse, in a few days, and had a general feeling of being "run down" and exhausted on slight exertion. On examination I found that she had some temperature (101° F.) and diagnosed a simple case of neurasthenia. Her bowels were regulated and she was put to bed. I told her she would not be able to return to her office for at least two months. She will remain in bed for two weeks, then she must go to the country to recuperate.

Case 2. I was called to see a woman who had had attacks of fainting. I found a strong, robust woman of forty, who had acted as housekeeper for her father and mother. Her family history was good. I was informed that she had overworked herself during the past few days. The family had been moving and, as no help was obtainable at the time, the two women did much of the work. On examination I found the heart was beating very irregularly. I instructed the woman to remain in bed two days until she was thoroughly rested, and to be careful not to exert herself too much after returning to her work. A week later I was sent for again. The same thing over again, palpitation of the heart, faintness, waking in the middle of the night, thinking she would die of suffocation, and this in a woman who was not naturally nervous. I said to her: "I have underestimated your case, you must go to bed and stay a week." She went to bed and stayed a week and got up feeling a great deal better, but at the end of another week she sent for me again. Further questioning elicited the information that her recent attacks had not been due to the over-exertion incident to moving, but to years of overwork. It appeared that she had acted as nurse to her father during a trying illness lasting six weeks. Just one month afterward her mother became ill and required nursing for three weeks. Before having time to rest from the extra exertion, preparations were begun for her sister's wedding—months of sewing, etc.—and finally, after the wedding was over, and getting the house in order again, she had the responsibility of the moving which had recently been done.

Then, for the first time, I was able to estimate the case; that instead of being ill from the results of a few days' overexertion, she had been exhausted through years of over-work and responsibility. I said: "Young woman, you must go to bed for six weeks. Four of those weeks to be spent in bed, the remaining two from bed to chair and from chair back to bed." At the end of that time you must go away on a visit for six months, then you will be quite well. All of which was duly carried out and she came home perfectly well.

The point of this story is that we must recognize the underlying neurasthenia and treat the case accordingly. The patients must be given a sufficient amount of rest and time for relaxation.

I make a diagnosis of neurasthenia in many cases milder than the two reported, which will recover in two, three or four weeks. They may be simply in a run-down condition and respond quickly to rest and treatment.

A physician should give a definite prognosis in these cases, setting forth the point of time and telling the patient just when they will recover. As soon as their minds are set forward to a definite time of recovery they will be resigned to knowing they will be sick two or three months, instead of weeks, and this will save them from delay and discouragements.

The treatment is indicated by the manner in which I handled the foregoing cases. They should be put to bed absolutely and approach as nearly as possible the Weir Mitchell method of treatment—

no visitors, good, nutritious diet, possibly a tonic, etc. The first few days after putting the patient to bed they will grow restless, but these patients must be handled with an iron will. The physician must be positive in his diagnosis and equally positive as to his treatment. Hesitation in the care of these patients is disastrous. I state my prognosis positively and the treatment must be carried out with equal positiveness if good results are to be expected. If these cases are not treated and kept in order they will become a burden not only to themselves but to those around them.

Deardorff Building.

[Written for the MEDICAL BRIEF.]

Prevention of Tuberculosis in Children.

BY E. LUTHER STEVENS, M. D.,

Professor of Pediatrics and Clinical Medicine in the Drake University Medical College.
Des Moines, Iowa.

To the practitioner it is a well known fact that the average pulmonary patient does not present himself for treatment in the early stages of the disease. In Iowa alone there are two thousand deaths every year from tuberculosis. On an average each one of these patients infects four persons, some fatally. At the present time there are eight thousand persons in Iowa who have the disease. Believing that a campaign of education on this subject would be most effective if directed toward the school children of the State and through them reach their families, I have prepared a little booklet of information which has been distributed to five hundred and forty-two thousand pupils by the Department of Education and the various county superintendents. By instructing the children regarding the cause of this disease, conditions which make the individual liable to infection, and by teaching them the early symptoms, so that the disease may be recognized in its early stages, there can be a tremendous saving of life.

Thinking it might be suggestive to the profession in other States, the writer desires to call attention to this method of reaching the greatest number of persons in the community in the hope that equally good results may be obtained.

Among the subjects taken up in my instructions to the school children are: Cause—

2. Who are liable to the disease.

3. Can tuberculosis be cured?

4. The chief conditions necessary for successful treatment.

5. Sanitarium needed.

6. Symptoms of disease that should lead to securing careful examination by physician, etc.

The chief point to impress upon the minds of the laity is necessity of destroying the sputum of a consumptive person. Thus, if his sputum is disinfected or burned he will not communicate the disease to anyone else.

Second in importance is fresh air and sunlight. The germ does not thrive in the open air.

Under heading two, anyone weakened by other diseases, such as grip, pleurisy, pneumonia, typhoid fever and measles, is in just the condition in which the germ of tuberculosis can multiply the fastest, because the bodily health or power to resist the disease is lowered. Anyone who habitually or excessively uses alcohol lessens his power to resist tuberculosis.

Anyone who is constantly overworked or poorly fed, or who lives or sleeps or works in a poorly ventilated room, weakens his resisting power, and easily becomes a subject of tuberculosis.

3. Tuberculosis can be cured if proper treatment is begun early. Even patients in advanced stages, if rightly treated, often partly recover, and are able to work and enjoy life for years. Every patient, no matter how far advanced the disease may be, can be so treated that he will not give the disease to those about him.

4. (*a*) early recognition of the disease. (*b*) Fresh air in the greatest abundance, day and night. (*c*) Plenty of the most nutritious food. (*d*) Absolute rest in bed until fever has ceased. (*e*) Carefully regulated exercise. (*f*) All of the above must be used under close observation of a competent physician who will see to it that everything is done for the individual patient that will increase his power to resist disease. While medicine may relieve some of the symptoms for the time being,

there is no drug that will cure the disease.

5. The treatment of tuberculosis is necessarily expensive, and it takes a long time—from three months to a year, even in early cases—so it is very difficult to successfully treat a case in the home. Many States are providing sanatoria for the treatment of tuberculosis, and Iowa has just made provision for such an institution.

6. A cough that persists for a few weeks and resists the usual remedies. (*b*) A constant tired feeling or "run down" condition. (*c*) Loss of weight and strength not otherwise accounted for. (*d*) Any bleeding from the throat or lungs. (*e*) The occurrence of frequent colds.

605 Citizens' National Bank Building.

[Written for the MEDICAL BRIEF.]

Bathing and Feeding in Typhoid Fever.

BY V. L. TREYNOR, M. D.,

Professor of Clinical Medicine in the University of Nebraska, Omaha, Neb.
Council Bluffs, Iowa.

While the modern text-book clearly outlines the treatment of typhoid fever, success in treatment can only follow a most rigid attention to the minor details; the peculiarities of the patient must be taken into consideration, and the plan of treatment modified to meet the indications in the particular case.

If I were asked to name the cardinal features in the management of typhoid fever, I would say (1) proper feeding; (2) the prevention of excessive waste incident to high temperature, by the use of water externally and internally; (3) elimination, through the skin, kidneys and intestinal tract, by supplying the patient with an abundance of water and keeping the body clean and comfortable.

By the judicious use of cold, externally applied, the temperature may be kept down to 103° F., and even in those cases marked by an excessively high temperature it is possible to keep it below 104° F. In my practice I favor the cold pack, for several reasons. It is less likely to produce shock in the sensitive patient and eliminates the bad effects that are sometimes produced in the intestinal tract by the sudden application of cold. The sudden application of cold to the abdomen stimulates peristalsis, and peristalsis, unduly stimulated, may cause a perforation and sloughing of the already ulcerated and weakened intestinal walls.

The application is begun by wrapping the patient in a sheet which has been wrung out of water at the temperature of the body, and applying the cold externally at intervals.

Under ordinary conditions I order the application of cold water when the temperature reaches 103° F., or at the end of the second or beginning of the third week, when the temperature approaches its highest point. It seems wise in some cases not to hold the temperature too low, as the constant bathing necessary to secure this end exhausts the patient, and the beneficent effect of the cold application is consequently negative.

With the exhibition of water applied locally, I make it an invariable rule to insist that the patient drink frequently and freely of water, thereby aiding elimination through the intervention of the skin and kidneys, keeping the general tone of the patient at the highest standard, and the temperature is held more readily in check. In fact, I regard the internal use of an abundance of water of so much importance that I always instruct the nurse to record the quantity of water given, just as assiduously as she does the medicine and food.

At times it is advisable to use a cold enema, using water at a temperature of about 90° F., exercising care that the water is not forced into the bowel under too high pressure. This can be avoided by instructing the nurse to have the irrigator placed not more than two feet above the level of the patient. Many times the temperature can be lowered very decidedly in this manner when other means fail, and additional benefit accrues both from the absorption of the water and the lavage of the lower intestinal tract.

The proper feeding of the typhoid patient is a matter of the greatest importance, and the physician who follows an inflexible plan is due to have many mis-

haps with his patients. Milk, of course, is the sheet anchor, but great abuses occur in its use. I like to have my patients receive an average of about one quart of milk in twenty-four hours, divided, preferably, into eight feedings. The nurse is always instructed to watch the dejecta, and if curds appear the quantity of milk is reduced. It is a very good plan to alternate the milk with egg albumen, which can be given slightly salted, or with a few drops of orange juice added, or in the form of an egg lemonade. Under extreme conditions of irritability of the gastric intestinal tract, it is sometimes advisable to peptonize the milk, but my preference is for the plain milk where the patient can digest and assimilate it. Many of the prepared foods have been greatly exploited in the field of typhoid fever, but the bodily strength of the average patient can be well maintained, and the excessive waste of tissue prevented, by the use of the foods described, varying them according to indications. In fact, it is doubtful whether a patient can be nourished on any of the various liquid food preparations unless supplemented by the use of milk, egg albumen, beef juice, etc., while most of them contain a very decided percentage of alcohol, which may be, and very frequently is, contraindicated.

Baldwin Block.

[Written for the MEDICAL BRIEF.]

Repair of the Pelvic Floor or Colpoperi Neorrhaphy and the Structures Involved.

BY BYRON ROBINSON, B. S., M. D.,
Chicago, Ill.

[This monograph is dedicated to Dr. Howard A. Kelly, in recognition of his meritorious and valuable contributions to medical science.]

Modern American surgery is rapidly becoming merely a technical art. The philosophy of surgery is lost in methods. The diagnosis, the rock and base of medical and surgical therapeutics, is sought *in vivo*, or subsequent to the completion of the surgical procedure. Physicians seek new surgical routes of technique regardless of the anatomic or physiologic bases, immediate or remote.

Professors of gynecology will announce that if a woman does not require a surgical intervention on her genital tract, that she belongs in the domain of the general practitioner. Nothing can be more ridiculous or absurd than such irrational views. Does the oculist, laryngologist, aurist or neurologist send a patient to a general practitioner, forsooth, because he finds no chance for surgical intervention? The gynecologist is a specialist, and should be in possession of knowledge to treat properly any disease of the tractus genitalis, or adjacent visceral tracts which influence it. Gynecology is not merely surgical technique; it includes the knowledge requisite to treat skillfully all diseases of the genital tract. Unfortunately, during the past decade in America there has been a prevalent tendency to exploit a new surgical technique which we will designate as visceropexy; that is, the fixation of mobile abdominal organs. In general visceropexy is irrational. In the gynecological field pexyism is fortunately mainly limited to hysteropexy. This signifies that the pexyite, regardless of the fact that the uterus is a pelvic organ anatomically and physiologically, forces the uterus to assume an abdominal position by means of fixation sutures.

The pexyite appears, in the maelstrom of his dominating surgical technique, to have forgotten the fact that the support of the uterus is chiefly the pelvic floor, and that the uterus is in its normal position—not when fixed by threads.

When perfectly mobile—A healthy uterus is mobile like a healthy testicle. Exudation or suture fixes the uterus just as inconveniently as epididymitis fixes the testicle. Visceropexy rests on an irrational base. It is unphysiologic. It attempts to substitute one pathologic condition (fixation) for another (mobility).

THE PELVIC FLOOR.

The gynecologist must cultivate the ability to build, to form a pelvic floor—the natural support of the uterus, the solid ground of nature on which it rests. Anatomically the pelvic floor is practically the levator ani with its proximal and distal fasciæ. Physiologically the pelvic floor consists of two segments—pubic

and sacral, which, like two bank doors swinging to and fro—to accomplish their function.

The pelvic floor (or diaphragm) consists of (*a*) muscles, (*b*) fascia, (*c*) peritoneum, and (*d*) organs with vessels and nerves. It is attached to the dorso-ventral and lateral walls of the pelvis, chiefly at the margin of its irregular exit. It has three objects, viz.: (*a*) to support viscera and resist intra-abdominal pressure, (*b*) to assist parturition, and (*c*) to aid the rectum and bladder to functionate. The pelvic floor has three apertures or slits—urethral, vaginal and rectal—which pierce it obliquely, similar to the cord in the inguinal canal, the biliary duct in the duodenum, or the ureter in the bladder wall. The oblique slits in the pelvic floor act like valves, which open to functionate, after which they are closed by intra-abdominal pressure and sphincter muscles. A detailed examination of the structure of the pelvic floor furnishes a base for the understanding of its function.

The physiologic pelvic floor appears unbroken when the urethral, vaginal and rectal slits are closed by the apposition of their valve-like walls. The pelvic floor may be divided into the pubic and sacral segments by the oblique vagina—*i. e.*, it consists of two widely superimposed or over-lapping valves.

The pubic segment consists of (*a*) the retro-pubic connective tissue; (*b*) the bladder, urethra, peritoneum, and (*c*) the ventral vaginal wall. The segment is attached or anchored to the distal border of the symphysis pubis in such a manner that it possesses extensive mobility. It exercises its movements chiefly on the elastic retro-pubic connective tissue as a bed. The urethra meets the bladder at right angles, and the peritoneum extends from the bladder to the ventral abdominal wall, enclosing the retro-pubic connective tissue.

The extensive mobility of the pubic segment is due to its limited anchorage to the distal border of the symphysis pubis, but also to the capacity of the peritoneum to become displaced or dissected from the ventral abdominal wall and bladder during motion or distention of the bladder and uterus.

The characteristic of the pubic segment is loose tissue, loose attachments, and free mobility, all of which accommodate dilatation and contraction of uterus and bladder and peritoneum. The dorsal bladder wall is loosely connected to the ventral vaginal wall. The urethra is blended with the distal ventral vaginal wall. The peritoneum over the bladder is loosely attached. The pubic segment is displaced from adjacent loose connective tissue. It will prolapse distalward, whence it is sacro-pubic hernia. The movable pubic segment includes chiefly the bladder, vagina, and, to a certain degree, the uterus, oviducts and ovaries move with it. The pubic segment presents a peritoneal side (three inches), a vaginal side (two inches), and pubic side (two inches).

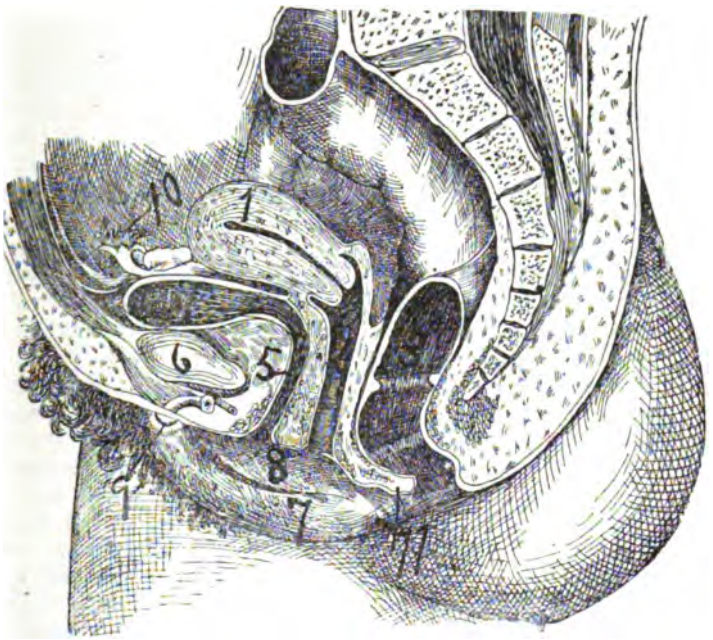
The sacral segment of the pelvic floor consists of (*a*) dorsal vaginal wall, (*b*) perineal body, and (*c*) rectum. It is firmly attached to the sacrum and coccyx by tendinous and muscular fibres. It is a fixed, immovable segment. The only method by which it may be displaced is by the bending proximalward or distalward of the coccyx. The dorsal vaginal wall is loosely connected to the ventral rectal wall as far as the apex of the perineal body. The sacral segment does not prolapse distalward. It may straighten, extend, and become lacerated at its distal end, *i. e.*, in the perineal body. The rectum does not prolapse (in rectocele), its wall distends from lack of fascial support. The peritoneum over the sacral segment is quite fixed. The fixed sacral segment supports the mobile pubic segment. The perineal body is the commercial border of this segment over which the imports and exports of the vagina pass, and is consequently liable to be damaged.

If one views the pelvic floor from its proximal side the first layer is the peritoneum, the second is the subserosum, which proximally is a loose, spongy bed of areolar tissue, which gradually grades into the levator ani fascia proximal, coccygeal, pyriformis and sacral fascia.

The third layer consists of muscles, the levator and the coccygeus and pyriformis. The fourth layer consists of the levator ani fascia distal. Practically the pelvic floor is the levator ani muscle,

with the levator ani fascia proximal and distal. The loose connective tissue serves as an excellent bed in which the pelvic organs functionate. The bladder and rectum dilate and contract in their elastic beds without trauma or loss of integrity.

In parturition, which is the maximum function of the pelvic floor, the uterus utilizes all the connective tissue beds for protection to avoid trauma, and to aid in returning to normal. In labor the contraction of the ventral muscular walls of the uterus draw the pubic segment proximalward, and the child's head drives the sacral segment distalward, and thus the with the three slits—vagina, urethra and rectum, closed, the pelvic floor is represented as intact—unbroken. The vaginal canal is a natural dividing line between the pubic and sacral segments. It is a line of a cleavage between the pubic and sacral segments. It allows the two segments to functionate separately. The ventral vaginal wall bounds the dorsal side of the pubic segments. The dorsal vaginal wall bounds the ventral surface of the sacral segment. In labor the pelvic floor is opened, *i. e.*, the pubic segment is elevated (proximalward), and the sacral segment is depressed (distalward).



LATERAL VIEW OF GENITAL ORGANS.

FIG. 1. An illustration of one of the normal positions of the uterus. 1, uterus; 2, vagina; 3, rectum; 4, bladder; 5, urethra; 6, symphysis pubis; 7, labia; 8, nympha; 9, clitoris; 10, oviductal pavilion; 11, perineal body. In the planning of the illustration a suggestion of Hoffman was employed. The normal uterus is perfectly mobile like the testicle, hence, if the uterus were fixed in the illustrated position it would be dislocated—fixed.

oblique valve in the pelvic floor, the vagina, is opened in parturition, as one passes between two swinging doors by pulling one backward and pushing the other forward. Parturition results in dilatation of the vagina, in straightening or expanding the sacral segment, and in relaxing the pubic segment.

The pelvic floor may be viewed as closed when the vagina represents an oblique slit, the closed rectum and urethra lie parallel to it and to the pelvic brim

In disease the pelvic floor may become displaced by deficient sacral support, *i. e.*, the perineal body may be lacerated and the distal part of the sacral segment straightened or extended. The pubic segment may lose its tone, and intra-abdominal pressure may be so changed that it will drive viscera distalward, *i. e.*, through the vaginal valve. This is excellently demonstrated in retro-position when the abdominal pressure is applied to the uterine fundus, and the cervix, act-

ing like a wedge, opens the segments of the pelvic floor. Uterine prolapse should be termed sacro-pubic hernia.

All herniæ possess a sac, a ring and a viscus. In sacro-pubic hernia the sac is the peritoneum, the viscus is the uterus, and the ring is the loop of the levator ani muscle sheathed in its fascia. The uterus itself has no more to do with sacro-pubic hernia (prolapse), than a segment of the enteron in inguinal hernia. This may be observed in patients with sacro-pubic hernia by asking the subject to "press as at stool," when the ventral vaginal wall appears first in view, next the cervix, and lastly the dorsal vaginal wall, enclosing the fundus.

Bimanual gynecologic examination, which means palpation of the internal genitals, consists in determining the position, consistence, mobility, dimension and conditions of the genitals. This method is accomplished by reason of relaxed psoas and abdominal muscles, mobility of the pubic segment and through shortening the sacral segment by forcing its distal end proximalward. The thighs are flexed on the abdomen to relax the two psoæ muscles. The index finger is introduced into the vagina, while the hand on the abdomen, through the mobility of the pubic segment, forces the genitals into the field of "touch," or palpation. The capacity of elevation of the distal part of the sacral segment explains why the traction forceps brings into view and direct palpation the uterus. The valvular action of the segments of the pelvic floor explains why vaginal hernia seldom follows vaginal hysterectomy.

To extirpate the uterus per vaginam, the pelvic segments or valves are opened, the uterus drawn through, after which intra-abdominal pressure closes them. Vaginal hysterectomy resembles parturition, labor, in delivering the passenger through the vaginal valve. Successful operations for support on the pelvic floor demonstrate that the sacral segment must support the pubic segment, and the pointed cervix must be directed from the vaginal exit or blunted by amputation. The vagina is a physiologic and anatomic line of cleavage between the pelvic segments, while the line between the rectum and vagina is a pathologic one.

For the suggestions of the division of the pelvic floor into pubic and sacral segments I am indebted to the excellent labors of Dr. D. Berry Hart.

Pelvic floor projection is the distance the floor projects distal to a straight line extending from the tip of the coccyx to the distal border of the sub-pubic ligament. Pelvic floor projection averages about one inch.

Intra-abdominal pressure is an important factor as regards the pelvic organs. Intra-abdominal pressure is muscular tension plus atmospheric pressure. It displaces that part of the pelvic floor ventral to the rectal wall, causing sacro-pubic hernia.

The line of cleavage of the pelvic floor as regards sacro-pubic hernia lies between the rectal and vaginal wall. The author has seen hernia of the abdominal viscera which had as a ring the space between the dorsal vaginal wall and the ventral rectal wall. There is no vacuum in the abdominal cavity, the viscera fill it. The tendency to a vacuum is obviated by atmospheric pressure on the abdominal walls and muscular tension.

The effect of intra-abdominal pressure is to force the pubic segment distalward against the sacral; it closes the valve (the vagina) made by the segments of the pelvic floor, and the vagina assumes the shape of a mucous slit. The pelvic floor bears the weight of the viscera, and hence it will project more than the other portions of the abdominal wall. In the same manner the water in a suspended rubber bag will, by its weight, project its lower part beyond the rest. In genu-pectoral position, by drawing the hymen toward the rectum, air rushes in, distending the vagina and forcing the pubic segment proximalward with the viscera.

The practical utility of the intra-abdominal pressure becomes apparent in the consideration of the uterine position. In the erect attitude the uterus is in physiologic anteflexion and the intra-abdominal pressure acts chiefly on its dorsal surface. This prevents sacro-pubic hernia, if the sacro-uterine ligaments are normal. Should the utero-sacral ligaments elongate, the cervix passes distalward, the uterine body passes dorsalward and intra-abdominal pressure acts on the fundus

and ventral uterine surface, inducing the uterus to descend or prolapse (sacro-pubic hernia).

Elongation of the utero-sacral ligaments and retroversion are the beginning of sacro-pubic hernia, uterine prolapse. The reason fat subjects have more hernia than spare ones, is because an excessive quantity of fat becomes deposited within the abdominal cavity, increasing the intra-abdominal pressure and weakening the abdominal wall. Intra-abdominal pressure forces distalward the pelvic floor ventral to the ventral rectal wall. Intra-abdominal pressure acting on healthy viscera only makes them more secure against sacro-pubic or inguinal hernia, because the hernial openings, especially the vaginal and inguinal canals, are valve-like or oblique. Relaxed pelvic exit represents laceration, elongation and separation of the levator ani fascia superior and inferior. Successful colpoperineorrhaphy means the repairing of the levator ani fascia proximal and distal.

CONTRAST OF PELVIC SEGMENT (PHYSIOLOGIC PELVIC FLOOR).

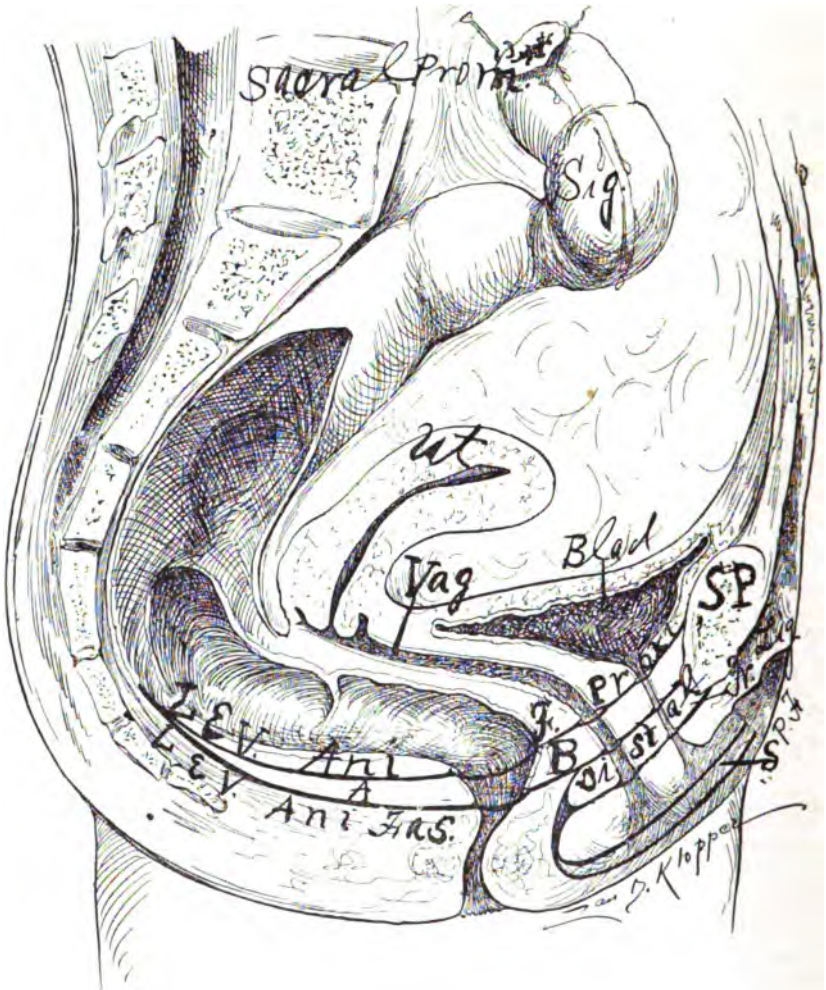
PUBIC SEGMENT.	SACRAL SEGMENT.
(1) It is visceral.	(1) It is vertebral.
(2) It is movable.	(2) It is fixed.
(3) It is composed of loose tissue.	(3) It is composed of firm tissue.
(4) In labor it is elevated.	(4) In labor it is depressed.
(5) It prolapses.	(5) It does not prolapse, but straightens, and the perineum becomes lacerated.
(6) It is composed of bladder, retropubic tissue, bladder peritoneum and anterior vaginal wall.	(6) It is composed of posterior vaginal wall, perineal body and rectum.
(7) It is the proximal ventral valve of the pelvic floor.	(7) It is the distal dorsal valve of the pelvic floor.
(8) It is loosely attached to the pubis.	(8) It is firmly attached to the sacrum and coccyx.
(9) Its peritoneum is movable.	(9) Its peritoneum is fixed.
(10) It is entirely displaceable.	(10) It is entirely non-displaceable.
(11) Rests on sacral.	(11) It supports pubic.
(12) It is elevated in genu-pectoral position by admission of air.	(12) In genu-pectoral position it is undisturbed or depressed.
(13) It is triangular.	(13) It is quadrilateral.

The pelvic fascia I have partially renamed. Fascia should be named according to the muscle or structure with which it is most intimately associated. The fascia of the pelvis, quite an independent structure, begins exactly at the ilio-pectineal line, or the brim of the pelvis. It lines the whole pelvis, being perforated by three apertures, viz.: Rectum, vagina and urethra. The obturator fascia is divided into proximal and distal by the white line (arcus tendineus), which is a remnant of the ventral connective tissue ligaments of the bladder. The white line extends from the dorsal surface of the pubis to the ischial spine, the white line not only divides the obturator fascia into proximal and distal, but serves as the origin of the levator ani muscle.

The obturator fascia proximal begins at the ilio-pectineal line, and extending to the white line, partially covers the obturator internus muscle. The obturator fascia proximal is in relation with the obturator nerve and vessels. The obturator fascia distal, extending from the white line to the ischial tuberosity, partially lines the obturator internus muscle. It is in relation with Alcock's canal. which transmits the pudic vessels and nerves. The ischio-rectal mass of fat in the perineal region extending from the white line to the median raphe, and extending from the white line to the ischial tuberosity, is surrounded by fascia that enclose the muscles which functionate or control the anus, vagina and urethra. Fascia supports and muscles functionate the viscera. The fascia applied to the proximal surface of the levator ani muscle is the levator ani fascia proximal.

The fascia applied at the levator ani muscle on its distal surface is the levator ani fascia distal. The levator and fascia proximal and distal terminate in the median raphe, or by blending with the pelvic viscera. The levator ani muscle is peculiarly strengthened by its double fascial sheath proximal and distal. The fascia covering the coccygeal muscle is the coccygeal fascia. The fascia covering the pyriformis muscle is the pyriformis fascia. The fascia lining the ventral surface of the sacrum is the sacral fascia. We thus have different names to the fascia of the pelvis which are in relation with definite structures. On the levator ani fascia proximal and distal depends the integrity of the pelvic floor. The levator ani muscle does not sustain the pelvic viscera. It

is performed by its fascia. The fascia of the pelvic thus consists of (*a*) obturator fascia proximal, (*b*) obturator fascia distal, (*c*) levator ani fascia proximal, (*d*) levator ani fascia distal, (*e*) pyriformis fascia, (*f*) coccygeal fascia, (*g*) sacral sages for nerves and vessels which are surrounded by lymphatic sheaths which serve to carry infection from one space to another. An ischio-rectal or perineal abscess could influence inflammatory processes in the pelvis and *vice versa*,



PELVIC FLOOR SEGMENTS.

FIG. 2. A diagram of the pelvic floor segments. (a) Pubic (ventral vaginal wall, bladder and retro-pubic fat); (b) sacral (dorsal vaginal wall, perineal, body and rectum). Also it represents the fascia of the pelvic floor (especially the levator ani fascia proximal and distal) in mesial section, demonstrating that the levator ani is reinforced by strong and dense sheets of powerful fibrous membrane. In this illustration a suggestion from Hart and Dickinson is employed. The pelvic floor anatomically consists of the levator ani muscle with its proximal and distal fascia. Physiologically it consists of the pubic and sacral segments, two superimposed or widely overlapping valves. A. B, levator ani muscle; Lev. Ani F. Prox, levator ani proximal; Lev. Ani Fas. Distal, presents a powerful sheet of fibrous membrane lying on the distal surface of the levator ani; S. P., symphysis pubis; Tr. Lig., triangular ligament.

fascia. There are other macroscopical apertures in the pelvic fascia than the vagina, rectum and urethra, through which the pelvic and perineal regions are connected. The pelvic and perineal regions are directly associated by pas- through apertures which, as nerves or vessels, are sheathed by lymph channels. The pelvic fasciæ are strong, fibrous membranes which sustain the pelvic viscera and form essentially the pelvic floor, and they maintain in definite anatomic and

physiologic relations the muscles, apertures, nerves, blood and lymph vessels. In pelvic lacerations following labor, it is lesions of the pelvic fasciæ that causes distress and damage. An operation which relieves suffering and repairs the lesion must be the one which restores the pelvic fasciæ.

The patient with rectocele, vesicocele, or sacro-pubic hernia has sustained lacerations of the pelvic fasciæ, especially the levator ani fascia, distal and proximal. Restoration of the pelvic fasciæ restores visceral support. Repairing of the pelvic fascia aids in restoring the levator ani muscles to its original relations.

(To be Continued.)

Ottomar Rosenbach, M. D., Berlin.

On March 20th died, in his fifty-seventh year, Professor Ottomar Rosenbach. The cause of his death was mediastinal tumor and corresponding heart affections. For a long time he had been a great sufferer. Having always been a hard worker, his main complaint to me in his letters was always that he could not work as he was accustomed to. By Rosenbach's death THE MEDICAL BRIEF has lost one of its sincerest and valued friends. He always spoke of the BRIEF as the fearless, independent medical journal which, like himself, stood up for uniform aims in medicine and for independence of the clinic in opposition to the prevailing fashion and methods of specialists, combating the domineering autocracy of those bacteriologists whose methods of treatment are based exclusively on researches in the laboratory. There can be no difference of opinion, even among those who do not agree with him in some points; all will agree that among the prominent men of our profession and our time, Rosenbach was, more than any other, an original thinker, observer and investigator, who made no concessions to the extravagant fashions in medicine of the present day. He was a profound linguist and favored reform of onomatology. Several papers of his were written for THE MEDICAL BRIEF. His biography and portrait appeared in the April issue, 1904. A. ROSE, M. D.

[Written for the MEDICAL BRIEF.]

Influenza and Relapsing Fever.

BY JOSEPH D. HARRIGAN, M. D.,
New York City.

A comparison of the symptoms of influenza with those of the epidemic disease known as relapsing fever, brings to light some very remarkable analogies.

In influenza, according to Zuelzer:

Invasion.—"The *onset* of the disease is generally sudden, as the name 'lightning catarrh' indicates. As a rule it is marked by a decided chill, or by malaise, lasting several hours, with slight chills alternating with heat. Only in rare cases are we apt to have malaise for several days, and an established cold beforehand."

In relapsing fever, according to Flint:

"Abruptness of invasion characterizes the disease. The attack is sudden. There is no prodromic period. The seizure is almost always marked by a well-pronounced chill, which is immediately followed by febrile movement. Usually the patient at once takes to the bed; but, in some cases, one, two or three days pass before there is this evidence of yielding to the disease."

In relapsing fever, according to Lebert:

"Characteristic, however, in these exceptional cases, with prodromes, is the quick onset of the disease itself."

Fever.—In influenza, according to Zuelzer:

"In the severer cases the fever, even at the beginning, seems to attain a rather noticeable intensity. * * * According to the older views, it is remittent or subcontinuous, and its course is lighter in the day, but in the evening and at night marked by increase of the various symptoms, and a rise in the frequency of the pulse and an increased heat of the skin. Under certain circumstances the temperature occasionally rises transiently as high as in pneumonia or continued fever."

In relapsing fever, according to Flint:

"The fever attains quickly to either considerable or great intensity, as denoted by the pulse and axillary temperature. Thus, of two cases in which the disease was developed in Bellevue Hospital, in one, the pulse, on the first day, was one hundred and twenty and the temperature 103° F.; in the other case the pulse

was one hundred and thirty and the temperature 103° F."

In relapsing fever, according to Lebert:

"Soon after the onset the morning temperature exceeds 102.2° F., reaching in the evening 104° F., and in a few days the remittent fever shows, morning and evening, a temperature one or two degrees higher; that is, from 105.8° to 107.6° F."

Pulse.—In influenza, according to Zuelzer:

"The pulse exhibits a varying character; it may be full and moderately accelerated (ninety to one hundred), but is also described as small and weak. It was not infrequently found irregular, or very changeable, so that, as Graves observed, it was often completely changed in from six to eight hours."

In relapsing fever, according to Flint:

"During the continuance of the first paroxysm the pulse and temperature generally denote a persistent intensity of fever, the pulse ranging, in different cases, from one hundred to one hundred and forty."

In relapsing fever, according to Lebert:

"The pulse becomes accelerated to one hundred and eight and one hundred and twelve in the morning, and one hundred and twenty and more in the evening. It is weak, though with tolerable fullness and tension; frequently quick; sometimes dicrotic."

Mucous Membranes.—(I) Respiratory.

As far as the respiratory mucous membranes are concerned, not so very striking an analogy is evidenced in relapsing fever, as compared with influenza, as exists between the latter disease and other of the great constitutional epidemic diseases. But an analogy between them exists nevertheless.

Thus, in influenza, according to Zuelzer:

"The symptoms are essentially of a catarrhal nature. We find most frequently marked cold in the head, with considerable discharge from the head, and sometimes epistaxis; redness of the conjunctiva, with abundant lachrymation; catarrh of the mucous membrane of the throat, larynx and bronchi; also sore throat; difficulty of swallowing, hoarseness, tendency to cough, and a burning or tickling sensation in the throat. The mucous membrane of the cavities of the nose, mouth and pharynx is generally found reddened and the tonsils swollen. * * * Auscultation frequently reveals sonorous, or, in places, crepitant râles; still there also occur cases in which all the auscultatory phenomena are very insignificant, or absolutely wanting. Yet many patients show more or less important evidence of dyspnea. According to Graves' view, they often occur with intermittent or rhythmically returning remissions. In many cases they are probably the consequence of complications, but sometimes no demonstrable lesions can be found in the lungs."

Here, as usual, the inevitable and obfuscating word, "complications," of which I have spoken so often, in other articles, is intruded, and if not taken for what it is worth would completely confuse us in interpreting the significance of symptoms and lead us far astray from the essentials of the great epidemic *constitutional* diseases.

"Influenza dyspnea" is, I think, the most proper and scientific term to apply to this development in the great *constitutional* disturbance present in this affection. It is not to be regarded as a "complication," but is part of the process, as likewise are many of the other disturbances, hitherto, in my opinion erroneously, spoken of as "complications."

Graves assumes a disturbance in the function of the vagus to explain such cases; Biermer is satisfied that they depend upon congestions of the lungs, which furnish few indications to auscultation or percussion, unless edema occurs.

With many patients these phenomena go on to great oppression, marked dyspnea, pain in the precordia, etc.

Pleuritic stitches, too, and pains under the sternum are observed without any appreciable physical changes. In certain epidemics these suffocative states are rather frequent.

In relapsing fever, according to Flint:

"Among the complications of relapsing fever * * * the most frequent are pneumonia (both lobular and lobar) hemorrhagic infarctions of the lungs, pulmonary edema, edema glottidis, pseudomembraneous laryngitis and pharyngitis, pleuritis. * * * Only a small number

of patients are affected with any of the complications which have been mentioned."

As opposed to this non-prevalence of these complications (so-called), we have the observations of Lebert:

"Mild bronchitis is *not infrequent* in relapsing fever, and usually remains insignificant. * * *

"While in former epidemics in Breslau pneumonia was very seldom observed, yet in that of last winter (1873), we noticed it quite frequently, as, indeed, had been previously the case elsewhere." * * *

And again he states:

"The respiratory organs present no peculiarities when complications do not exist, but certainly during the last Breslau epidemic (1873), *many patients perished of pneumonia.* This pneumonia, which might be either single or double, presented the usual appearances of diffuse inflammation of the lungs, the remaining parts of which were also edematous."

Now, proceeding to that form of relapsing fever, called bilious typhoid, which, on account of its severity and mortality, has given excuse to some observers to be regarded as a distinct disease, but not, it is pleasing to remark, so considered by all. We find the same inevitable re-duplication of influenzic symptoms, which it has been my privilege to mention in other writings, apparently forms the basic groundwork of all epidemic disease.

We find, according to Griesinger, quoted by Lebert, in Ziemsen's cyclopædia:

"Closer examination shows numerous quickly appearing localizations; often bronchitis or pharyngitis * * * hoarseness, difficulty of swallowing, with croupous deposit on the mucous membrane of the pharynx, bronchitis, extensive lobar pneumonia." * * *

As far as the pathological anatomy in this disease is concerned, Lebert says:

"Petechiæ and ecchymoses are found at quite an early period, as well externally as internally, upon the mucous and serous membranes. The organs are generally deficient in blood, and diphtheritic exudations often exist upon the mucous membrane of the pharynx, extending even into the larynx, and sometimes assuming an ulcerous character. Enlargement of the bronchial glands, bronchial catarrh, lobular centers of collapse, or more considerable infiltration of the lung are observed."

Mucous Membranes—(II) Gastric and intestinal:

In influenza, according to Lebert:

"The mucous membrane of the digestive organs is likewise affected in many cases, although generally not to so high a degree. Loss of appetite, increased thirst, a coated tongue, a bad, pasty taste; sensitiveness of the epigastrium, and, not infrequently, colicky pains and diarrhea, or nausea and vomiting, accompany the disease. In other cases there is persistent constipation."

Turning to relapsing fever, we find, according to Lebert:

"The fever, intense and continued from the commencement, is accompanied by thirst and loss of appetite, less frequently beginning with nausea and vomiting. The patient complains of a bad taste, the tongue is thickly coated, and later dry. The bowels are somewhat constipated, or there is a slight intestinal catarrh, which is more frequent and persistent than the vomiting, which sometimes appears at the same time."

The dyspnea, previously mentioned, in influenza, has its counterpart in relapsing fever.

Lebert says: "With the decrease of the fever * * * the breathing, previously hurried and *somewhat* difficult, becomes regular."

Running briefly through various other symptoms of influenza, we find them easily paralleled in relapsing fever.

Nervous Symptoms.—In influenza Zuelzer says:

"The prostration of the strength is very marked from the beginning. * * * They complain of severe headache. * * * We find, together with considerable depression, very severe pains in the limbs. At times they are limited to particular muscles, tendons or ligaments, or are perceived as a generally diffused hyperesthesia over the whole body. Patients complain particularly often of hard dragging or boring pains in the calves, the hollow of the knee, the shinbone, or the back."

In relapsing fever, according to Flint:

"A symptom referable to the nervous and the muscular system is highly characteristic of the disease under consideration. I refer to arthritic and muscular pains, more especially the latter. * * * Pains in the loins, the calves of the legs, and the muscles in other situations, are generally much complained of."

In relapsing fever, according to Lebert:

"The muscles of the body, however, are the seat of severe pain * * * it is situated in the muscles of the neck, back, chest and abdomen, and in the upper and lower extremities. It is most severe in the latter, particularly in the calves. The character of the pain is splitting, piercing, boring, or more indescribable."

"In many cases, particularly among females, a general hyperesthesia of the skin shows itself during the attack."

Sweating.—In influenza, according to Zuelzer:

"Sometimes frequent sweats show themselves."

In relapsing fever, according to Flint:

"The perspiration in some cases is abundant."

And according to Lebert:

"Sweats occur."

Relapses.—In influenza, according to Zuelzer:

"Relapses are not rarely observed, and sometimes occur even in the course of the same epidemic."

Eyes.—"The influenza process," according to Zuelzer, "is followed by various sequelæ, and these are so frequent that many observers have indicated them as immediately connected with the essence of the disease. * * * Among them may be counted such cases as present an intense catarrh of the conjunctiva or of the ear."

In relapsing fever, Flint says:

"In some epidemics affections of the eye have been observed from one to four weeks after the termination of the disease."

Now, this comparison of symptoms might be continued through the whole gamut in the diseases under consideration, in similar manner as was done by the writer in paralleling the symptoms of influenza and typhus fever, as likewise those of influenza and cholera, but it seems to me unnecessary to lengthen out the subject further.

I think that a sufficient analogy has been shown to exist between nine-tenths of the symptoms as to prove that there is a common foundation upon which these diseases are constructed, and, as in relapsing fever, there are the added developments of a swollen spleen and a swollen liver, it would necessarily follow that the construction of this disease was based upon influenza as the foundation, and not, of course, influenza upon relapsing fever.

As regards these extra developments in the latter disease, it must be remembered that the law in physics, known as the parallelogram of forces, is equally applicable to the human body and the chemical and electro-chemical processes transpiring therein as it is to any other entity in the physical world.

In conformity with this law, the energy developed as a consequence of the poisonous chemical material absorbed by the system, finds expression in what might be called points of least resistance, in this particular case, the liver and spleen.

Combined with this law in its application to the human body we must take into consideration also the natural selective action of various chemical agents involved in the general constitutional disturbance.

This selective quality in the disease-producing or disturbance-producing chemicals absorbed finds its counterpart and its analogues in the selective action of chemicals used by us in medicine to combat disease, as, for example, calomel, ergot, quinine, digitalis, etc., each of these having a distinctive sphere of action.

In conclusion, it seems as reasonable to consider, in view of the fact that nine-tenths of the symptoms of influenza can be shown to exist in other of the epidemic diseases, then the factors that go to make up the result—influenza—must also go to make up the result: relapsing fever, or typhus fever, or cholera, as the case might be.

It seems to me an absolutely simple proposition that one disease can be contained in another; just as simple, in fact, as the proposition in arithmetic, one number can contain the prime factors that also go to make up another. The prime factors

of eight, for example, being two, two, two, the bringing into the question of another factor does not eliminate the eight, but simply increases its value, so that we find the result of the prime factors two, two, two, two, to be eight, doubled, or sixteen.

Thus it seems to me easy enough to explain the similarity of the vast majority of the symptoms in the varying phases of epidemic disease, by assuming certain factors (chemical and electro-chemical) to form the groundwork, as in influenza, the superstructure being constructed upon this foundation, the variations in this superstructure being due entirely to the varying chemical and electro-chemical factors of environments, localities, seasons, etc.

In fact, the whole process is like a grand and complex laboratory experiment, in nowise differing, except in grandness and extent, from the simple experiments that yield ozone instead of oxygen, hydrogen peroxide instead of plain water, and so on almost *ad infinitum*.

668 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

Rectal Diseases — the Bete Noire of the Physician.

BY HOWELL B. GWIN, M. D.,
Nashville, Tenn.

In a series of articles I desire to give some of the salient teachings of twenty years' experience in the treatment of rectal diseases, endeavoring to avoid as far as possible technical language, I will seek to be scientifically exact in the use of such phraseology as will be readily understood by all. If I shall put any brother physician to thinking along new lines, and if I shall present any helpful suggestions, this effort to do good will be rewarded.

Let us consider:

I.

HEMORRHOIDS OR PILES.

The word hemorrhoid comes from two Greek words, meaning "flowing blood," a name which does not define, but is probably given on account of one symptom, bleeding, which sometimes appears. Piles is from a Latin word, meaning "a ball," and though plural in form, is sometimes used in the singular. An accepted definition of a hemorrhoid is "it is a vascular tumor of the mucous membrane of the rectum, the anus, or both." Piles may be classified into two varieties: External and internal. It is easy, however, to mistake concerning external piles, which do not bleed, and may be due to flaps of the skin which have hypertrophied. It is true that these flaps or folds may be inflamed, producing pain and discomfort. In external piles the skin alone is involved, and the tumor is outside the external sphincter muscle, and can not be pushed back into the bowel. In old cases internal piles protrude outside the anus, but may be pushed back into the bowel to remain for a greater or less period of time. In examining a patient it is always well to learn whether there is a combination-pile, that is, one partly external and partly internal, and also to understand well the nature and occasion of the protrusion. The appearance of the rugæ and the condition of the mucous membrane of the parts, whether healthy or unhealthy, and, of course, a minute examination of the protrusion itself, are necessary. I have found that the primary lesion is due to the separation of the mucous and muscular membranes, and have reasoned that the circulation must be restored, absorption accomplished, and the re-attachment of the membranes secured before there can be a permanent cure.

In reaching a diagnosis of any disease no competent physician relies entirely upon the testimony of the patient. This, of course, will supply certain data, but his diagnosis to be authoritative and conclusive, must embrace all the facts connected with the disease. Just here let me warn my younger brethren never to sacrifice facts to theories, and never to cling to remedies based on conditional theories and limited facts. The true physician, while accepting known facts as regards diseases and its treatment, diligently searches for facts yet unknown and essential. To the care of such a physician the progress of medicine is committed.

In rectal diseases the physician must be thoroughly acquainted with the gen-

eral constitution, and with every abnormal feature which may or may not be directly or indirectly connected with the case in hand. He must never be satisfied with a mere digital examination, but with an up-to-date rectal speculum examine and treat each and every lesion in the anal strait. Of course, his patient will tell him of a sense of fullness and heat, a tight sphincter, throbbing pain, tendency to strain, sometimes attended with itching sensation, and a slight elevation of temperature and more or less discomfort in any position he may assume.

We must be careful to differentiate hemorrhoids from polypi, malignant or cancerous growth, villous tumors, prolapsus, pruritusani and hemorrhages (of some of these we will speak in a subsequent article).

It is doubtless true the human race has always been victimized by piles. Moses, the oldest authentic writer, tells us of an epidemic of "emerods" sent as a punishment upon the people. Many years later the author of the first book of Samuel records a similar calamity. No generation, nor sex, nor class of men, nor climate is free from this disabling malady. Let us, therefore, consider for a moment the etiology of this disease. Many veins in the rectum form the hemorrhoidal plexus. A part of this blood is returned by the internal iliac to the inferior cava, the rest through the inferior mesenteric to the liver—these veins have no valves. It has been held that the principal cause of this disease is due to the obstructed passage of the blood through little slits in the muscular wall. A further explanation is that piles spring from diseased coats of the blood vessels, terminating in and under the mucous membrane. It is also true that some pressure from above, interfering with the venous circulation, produces piles. Other general causes are morbid growth of the spleen, liver, uterus, ovaries and prostate, which give rise to venous obstruction. Other diseases, such as catarrh, stone in the bladder, urethral obstruction, etc., give rise to hemorrhoids. A proximate cause is the pressure of hard and stagnated feces upon the rectal ampullæ or sigmoid flexure. In short, the causes of hemorrhoids are, (1) the weakening of the forces that move the venous blood from the rectum to the heart; (2) obstruction of the venous outflow from the rectum , and (3) predisposition. Young blood vessels germinate from the older vessel walls and form a cavernous tissue—the result is piles.

Treatment. It is not my present purpose to enter into the details of the treatment now enjoined and practiced by our professional authorities. This has been fixed in two kinds: Palliative and operative. The palliative embraces ointments, salves, anodyne solutions, hot poultices, acid applications, suppositories, etc. The operative includes the cautery, ligature, scissors, knife.

In concluding this article I desire to ask a few questions: What is the percentage of cures by these treatments? Brother physician, have you been satisfied by their use? and have your patients been satisfied? Did the disease return again? In what length of time and in what proportion? Is it wise to stubbornly stick to a course that does not give us adequate results? Is it possible to secure a better mode of treatment? Are you thinking and searching for a remedy? No answers to these questions are asked for. We simply urge you to *think.*

(To be continued.)

[Written for the MEDICAL BRIEF.]

Collinsonia or Stone Root.

BY E. E. TRUITT, M. D.,
Maquon, Ill.

In reply to Dr. I. Moore, of Kingsland, Texas, in regard to the therapeutics of stone root, March number of BRIEF, would say, as a specialist in catarrhal diseases, that we have used the fl. ext. of collinsonia with marked success in catarrh of the larynx, bladder, and, in fact, in catarrhal troubles anywhere in the system, but its specific effects seems to be on the larynx, and we would more recommend it in coughs having their origin in the larynx, in aphonia and weakness of the vocal cords. Next to this, we would prescribe it alone, or in combination with fl. ext. of buchu in catarrh and irritation of the bladder, with the addition of bicarbonate of soda. I hope this may be of benefit to the Doctor.

[Written for the MEDICAL BRIEF.]

Humbug.

BY S. E. GIBBS, M. D.,
New York City.

A devout disciple of Mrs. Mary Baker G. Eddy asked me the other day if there is not a good deal of humbug about the practice of medicine. To which, of course, I indignantly replied: "Certainly not."

But his question set me to thinking whether it could be possible that such a thing as humbug could, in any way, be associated with our noble profession.

When a Christian Scientist asks such a question it would seem as if the time had arrived to review the situation and so be prepared with an answer should such a question againg be propounded. And, to date our investigation as far back as possible, it would seem proper to begin with the newly fledged M. D. who, after purchasing his horse and carriage on the installment plan, drives through the crowded streets at a two-thirty pace, visiting-list in hand, which he diligently peruses, and in which is inscribed the name of his one long-looked-for patient, while his corrugated brow reveals the intense anxiety to get through his arduous labors in time to hear the inspiring tones of the supper bell. And next morning robs all the young ladies on the block of their "beauty slumber" by the clatter of his horse's hoofs as he starts on his urgent call to — Riverside Drive or Central Park.

Humbug, do you say? No, the young man is merely a victim of insomnia, complicated with excess of vitality.

Then there is the doctor you meet, and to whom you, in the innocence of your heart, and with all the frankness of youth, impart the doleful information that practice is dull, and who proceeds to cheer you and raise your spirits by informing you that this is a sort of "off day" with him, and then counts on the fingers of both hands the calls he has made (and he would need his toes also for the calls he has to make in the afternoon), and you feel depressed, but, rightly or wrongly, find it difficult to suppress the murmur beneath your breath—humbug! Wrong again. He has recently erupted his wisdom teeth, that is all.

Also the "professor" (perhaps of chemistry only) called by his friends to meet you in consultation in a critical case of pneumonia or typhoid fever, and who, posing before your patient as a specialist, criticizes your treatment, and carries away in his pocket all the financial resources of the family. Humbug? No; he has a large family and a small salary.

The doctor who writes the glowing testimonial to the virtues of a proprietary concoction, and who prefaces his article with the stereotyped statement that "He is averse to recommending any proprietary medicine, but in this case is compelled by his love for humanity to break through his rule," and so he writes what may be termed his virgin testimonial; of course, completely unbiased by the fact that he is the owner of sundry shares of stock in the manufacturing company, but which fact he omits to mention, may be perfectly honest—but?

Suppose we now come a little nearer home, and call attention to that pile of reprints on the reception-room table, bearing your name in large type on the title page for the inspection of your patients. Why does the supply never diminish? And does your printer charge by the thousand or by the month?

The many diplomas, certificates and society emblems on the walls look pretty, and are, no doubt, noticed by patients who will be duly impressed with your importance, so better let them remain where they are. That pile of bank notes on your desk, however, though they may indicate your financial prosperity and corresponding successful practice, would, perhaps, be safer in your cash-box or pocket, provided they are genuine.

Why allow your poor horse to stand at your door for half an hour in cold, wintry weather while you carefully pack your instruments in a satchel? That old chronic rheumatic patient you are to visit today will not need them, though he may be interested in listening to your casual remarks about the rare operation you are to perform this afternoon. But it's hard on the horse.

Why, when purchasing the above-mentioned animal did you exhibit a decided preference for a piebald, rather than a sorrel, gray or bay?

Don't you know that piebald horses are considered less robust than those of another color?

Why place that large six foot by four glass case on your office wall, and fill it with obsolete surgical instruments. It's a deal of trouble to keep them clean and bright, and you can carry all the instruments you are ever likely to use (outside of a hospital) in a very small handbag.

Those foreign labels on your trunk when you return from your annual "week off," are impressive, cheap, and can be purchased at various places downtown, and are silent witnesses of your sojourn in the hospitals of Europe; it being well-known that only frivolous society people and insurance company officials visit European capitals for mere pleasure. Physicians go there for "experience in the hospitals." The necessary knowledge of a foreign language, in order to understand French or German professors, is easily acquired, but, strange to say, is as easily forgotten on returning to one's native soil. In fact, I have known some physicians to inadvertently leave it behind them on the ship. To successfully pose as a specialist in any case to which you may be called on your "return from abroad," is a valuable accomplishment, and will enable you to demand and receive a much larger fee than the all-round general practitioner is usually able to command. It will, perhaps, be noticed that although the original purpose of this article was to ascertain whether there are any humbugs in medicine it will be found to contain also some hints that may prove of value to the recent graduate, especially if he be from a rural district, and aspires to a city practice. Along this line we might suggest that he keep a good supply of medical journals (not omitting the BRIEF) in his reception-room, thereby imparting an air of erudition to that apartment. The doctor himself may never have read any of them (excepting, of course, the BRIEF), but the fact of his having subscribed for them is evidence to his patients that he is no humbug, but is thoroughly "up to date."

That long list of calls to patients in the most fashionable section of the city, and which completely covers the upper side of the slate in the hall, need not prevent the messenger from the more humble patient inscribing his name and address thereon, he can turn the slate over, and if it remains over all day, you may lose nothing, and by reversing it next morning, will save considerable valuable time that might be wasted in rewriting it.

When a prospective mother calls to engage you to attend her in her confinement, it is quite permissible to place her on your obstetric list as number one thousand five hundred (audibly, of course); she will then have great confidence in your skill and experience, and in her eagerness to secure the services of so eminent an obstetrician, will, no doubt, fail to take note of the date of your diploma on the wall. Besides, women love to be humbugged almost as much as men do.

When using the stethoscope do not be tempted to omit to count audibly the number of râles, mucus, submucous, crepitant and subcrepitant, and other adventitious sounds that may be absent. It is perfectly right to impress the patient with your skill as a diagnostician, and if he is not sick, he will think he is; which, so far as your bank account is concerned, is in effect identical.

The humbug in the above procedure is not easily detected, and has, therefore, sometimes been successfully practiced by the specialist.

Those little unmedicated tablets which you, dear reader, so carefully dispense with minute directions as to their administration when you are doubtful about your diagnosis, and require a little time to read up. Do those little tablets not contain, in addition to sugar of milk, at least a fraction of a grain of extractum humbugii?

And, oh, my esteemed homeopathic brother (whisper to me the answer), why does the liquid in each glass, a dose of which is to be so faithfully administered every hour alternately, often differ so little in taste but so much in color?

That imposing electrical machine which is always out of order when your patient is, and working well after he has recovered, cost a lot of money, but to use the words of the good old deacon who once advised me to occupy a front pew in church, "it pays."

And now may I be permitted to ask the celebrated surgeon who so disinterestedly advised that hysterically inclined patient to furnish the necessary material for his afternoon clinic by submitting to an operation for appendicitis, thereby enabling him to complete his series of one hundred consecutive cases without a death. (See reprint on office table).

Did you really open the abdomen? And are you quite sure that you did not forget to thread your needle, notwithstanding the mute but conclusive evidence of that neat row of stitch-holes on either side of the wound?

And then we have the "medical expert" who, while waiting for the ink on his diploma to dry, poses as an "alienist," notwithstanding the fact that he is possessed of only a rudimentary knowledge of the anatomy of the nervous system, and none whatever of psychology, and by his testimony on the witness stand humiliates the entire profession, lowers it in the estimation of the public and makes of it a laughing stock. Is such a man a humbug, or is he only afflicted with cranial hypertrophy?

On the other hand, we see two groups of so-called experts, learned men, thoroughly versed in all that pertains to the functions of the brain and nervous system, with all its vagaries and deviations from health, opposing each other, one group being paid large fees by the prosecution, the other by the defendant, and flatly contradicting each other, and we are led to ask: Of what value is such testimony? And do all the gentlemen engaged give their honest opinion, or are some of them suffering from anemia of the bank account?

I leave the answer to the reader.

On impartially reviewing the situation I am forced to admit that there may, perhaps, be just a little humbug connected with the practice of medicine, but only a little.

22 East 126th Street.

Inclosed find P. O. money order for one dollar, for which send me the BRIEF. It is one among the best journals that comes to my office. I want it as long as I practice medicine.—W. M. SOLOMON, M. D., Krupp, Ark.

[Written for the MEDICAL BRIEF.]

Homeopathy vs. Allopathy—Comparative Materia Medica and Therapeutics.

BY N. SISCA, M. D.,
Killarney, Queensland, Australia.

(Continued from page 300.)

XI.

The following few cases, published by homeopathic physicians, whose names are a guarantee of absolute trustworthiness, will, I think, better than anything else, give a fair idea of the difference between homeopathic and allopathic therapeutics:

Case 1.—Mrs. T. had become very low in consequence of childbirth, attended with violent puerperal fever, the cure of which had required several months. She now complains of a very painful pressure in the region of the left lobe of the liver. She looks ill, though not icterical; her tongue is coated; she is ill-humored; of anxious mood. This is attended with vertigo, which has the peculiarity that she feels better when up, while the vertigo returns when she lies down. This is the more strange, since the patient is enemic, and the vertigo of enemic patients usually passes away while lying down.

Repeated and most careful examination gave no positive result, except a little more painfulness about the spot, which would probably correspond to the gall bladder and its environs, radiating therefrom into the cardiac region or into the pit of the stomach.

Lycopodium, *China* (cinchona) and *avena* gave no relief, and it occurred to me that if I succeeded in improving the general state of her constitution the other ailments would be relieved. I turned, therefore, my attention to *calcarea carbonica*, which was given, and which speedily cured the pressure on the liver and the vertigo.

The clew to the selection of calcarea was that among its symptoms we find: Abdomen distended, thick and hard, *pressive pain in the liver*, also, *sensation of attacks of vertigo.*

What should be the allopathic treatment of a case like that? It is quite possible that small doses of sod. salicyl., together with a short course of Blaud's pills, might

have done as much good as the calcarea, but the fact remains that calcarea given on homeopathic lines cured, and cured quickly.

Calcarea carbonica, or *calcarea ostrearum*, are the homeopathic names for our *calcii carbonas*. The name, *calcarea ostrearum*, is accounted for by the fact that the homeopaths, instead of using the purely mineral salt in the form of powdered chalk, use the soft white substance, which is found between the external and internal layers of the oyster shell.

Allopathy has practically no use for carbonate of lime. We find in text-books that it is antacid and astringent, and that it should be given in doses of ten to sixty grains, but it is pretty safe to say that nobody ever prescribes it. Homeopathy, on the contrary, ranks it among the most valuable remedies in its *materia medica*, and never gives it in doses stronger than the 1/1000 of a grain.

Case 2.—Ovarian congestive neuralgia. On September, 1895, a young woman, aged twenty-six; fresh complexion; medium height and stoutness, with fair hair and gray eyes, came to me conplaining of pain in the side, the situation of which she indicated by placing her hand over the left ovarian region; also of pain in the back—lumbar region. She has had a slight pain in the left side for years, but latterly it has become worse.

"When I breathe it seems to draw up, and then it pains me. I don't feel it at my periods, nor for a little while after—a few days; sometimes a week. It is a kind of stabbing pain; it is always there a little, but when I draw my breath it stabs worse." Sometimes she fancies there is a little swelling, but it goes again, and she cannot say that it makes any difference to the pain. No pain during urination, and no increased desire to evacuate the bladder. Suffers from constipation; going two and three days without a stool. Pain in rectum at times; generally when the pain in the side is worse. Menstruated at seventeen; always regular, except on the month before last, which she missed, while away from home. On returning home the period came on again. Prescribed podoph, 1x. t. d. s.

October 7.—"I feel much better; have not had the pain for more than a week. Bowels also better. No pain in the back since beginning to take the medicine."

Patient continued well for a period of between two and three years, when she had a slight return of the ovarian pain, which was again removed by *podoph*.

In the pathogenesis of podophyllum there are these symptoms: Pain in right ovary and uterus; numb, aching pain in region of left ovary.

How would such a case as that be treated by an allopath? Like other neuralgias, on general principles. A good few years ago *conia* pessaries were said to be a good remedy for ovarian neuralgia, but we do not hear much about it now. *Gelsemium* "is said to be useful," but on the whole, the allopathic treatment of ovarian neuralgia rests on the general principles of hygienic measures, plenty of rest, iodine painting and tonics.

Case 3.—J. M., forty-nine, tailor, has been suffering for the last twelve months from the effects of overwork and worry. First seen on September 30, 1901. He complains of being dreadfully low and depressed; can not sit down to his work; has to rush out of the house if he attempts it. Says that if he lies down during the day he has uncontrollable thoughts of suicide. Suffers much from insomnia; wakes in the early morning about two or three o'clock, and can not sleep again, and feels very badly then. Has obscure nervous sensations and pains in the head. Pulse small and feeble. Prescribed *aurum muriaticum* (chloride of gold), 2x four times a day, with hot beef tea at bedtime, and some light nourishment on awakening in the early morning.

October 8.—Feels better; less depressed, and is beginning to sleep better.

October 18.—Going on well.

October 25.—Looking very much better, and sleeping well now; spirits greatly improved.

After this his attendance became less regular, but at the last visit he said he had resumed his occupation as a tailor for the first time for over a year.

What would we do in such a case as that? The patient said he had had plenty of tonics without being any the better for them. What else could we think of? We have no remedy for mental depression and low-spiritedness. True, we always have

the bromides with us, but in a case of this kind they would probably make depression worst depressed, and, therefore, the only thing we could think of would be plenty of rest and a change of air.

Case 4.—Psoriasis in a parrot cured by arsenic.

A beautiful parrot of the Channana variety was caught about a year ago. It was apparently in full health. Its feathers were bright green, with red streaks on the middle of the upper surface of the wings. It was put in a cage. After about a couple of months' confinement it was noticed that feathers were dropping off, first from the breast, then from the wings and from the tail. Most of the downy feathers of the breast became white before dropping off. In the course of three or four months the bird had lost so much of the feathers of the wings and of the tail that it was unable to fly; so, during the day it was let out of the cage, and allowed to walk about, and after nightfall was put in its cage again. Notwithstanding this freedom given to it, the disease did not show any sign of improvement. The ladies from time to time gave the bird baths of turmeric water, which, according to them, is a powerful insecticide, but these baths were of no use. In the course of ten months from the commencement, the bird lost nearly three-fourths of its feathery covering. Singularly enough it did not lose its appetite. It could eat well, and, in fact, it was rather greedy.

Then I thought of trying some medicine, and arsenic was the first medicine that came to my mind. I could not, however, make the poor thing take the drug. I put some globules of a high dilution of it in its milk, but seeing that I had put something in the milk it would not take it. At last I thought of mixing with the grain soaked in water with which we used to feed it a drop of the medicine, and he ate the grain. In about four or five days the dropping of feathers ceased. In about a week the downy feathers of the breast, which had become white, began to turn green. In a fortnight feathers appeared in the wings and the tail, and began to enlarge to their natural dimensions. In the course of a month the bird had nearly regained its full and beautiful plumage.

How would we treat a similar case?

Since both homeopathy and allopathy recommend arsenic as one of the remedies for psoriasis, the only ground of difference in a case like this would be the dose. Leaving the allopathic dosage to the discretion of the reader, I will just say that in the case quoted above the quantity of arsenic given was a single dose of one drop of the 30x (thirtieth decimal dilution). Translated into plain figures this represents the nonillionth of a grain of arsenic. Shall we say *ne quid nimis?* The homeopaths would reply that it cured the parrot.

[Written for the MEDICAL BRIEF.]

Practical Notes.

BY DR. A. ROSE,
New York City.

II.

Many years ago a physician in a fashionable German watering place reported in some medical journal an original observation which proved to be of more importance than the discovery of a new bacillus. Unfortunately, I have forgotten the name of the author, and the name of the journal—as it will happen when we do not at once write down such names in our scrapbook. The most remarkable fact is that I never saw any mention of the discovery in all literature, and, notwithstanding my speaking of it repeatedly in medical societies in my lectures, nobody seems to pay attention. Now I will bring it before the readers of THE MEDICAL BRIEF, because I know that there are many who will listen to practical and valuable new and original observations, even if they are not in the line of bacteriology, the prevailing topic of the present time.

The physician of whose discovery I wish to speak was a gynecologist. In his spa he attended many cases in which there was complaint of backache, and in which this backache had been attributed to some uterine trouble. On examining many patients with this complaint he became finally convinced that there existed a number of cases in which there was absolutely no pathological condition of the generative organs recognizable. The characteristics in such instances were: There was distinctly marked pain on pressure over one of the processes of a vertebra, from

the first lumbar vertebra down to the fifth. The pain—without being produced by pressure—was felt during the night when the patient was in bed, and more especially on awakening in the morning. As a rule, no pain was experienced during the day. These patients had a slight elevation of temperature in the evening; were thirsty at that time, and had all the feeling of being not well; of being under a constant strain. Many of these sufferers had been under gynecologists' care. The uterus or the adnexa were accused of being the cause of all the ailment; curettage and other heroic measures had been resorted to, without avail. In one of my own cases the patient had been treated by a specialist in rectal surgery; he had accused the coccyx, and removed this bone, which was quite innocent, in fact, in this case, and the result was that the patient was the worse for the operation. Judging from my own experience, I think that many women are treated for all sorts of gynecological diseases who suffer from nothing else but the described affection of a process of a lumbar vertebra.

Now, what is this affection? It is periostitis, periostitis confined to a vertebral process which will never heal of its own accord, but which will be cured by anti-periostitic treatment. All cases which came under my observation had been of years' standing, and since I read the paper mentioned, and since my attention has been directed to this kind of ailment, I have seen a great many, and had the satisfaction of seeing each and every one recover in the course of time.

Now, what is the treatment? First apply two leeches to the very spot at which there is the characteristic pain on pressure; use a glass provided for the application of leeches, in order that they may really attack this very spot; have them applied at night, so that the patient is not inconvenienced by having to be in bed during the day while the leeches are attached, and while the oozing of blood goes on after they have fallen off. The next day, and every day following, for weeks and months, according to circumstances, have the spot and the nearest surroundings painted once daily with tincture of iodine. In case this tincture causes soreness of the skin, discontinue the application for a day or two, *i. e.*, until the skin is intact again. Internally, give iodide of potassium or sodium, ten grains in water, three times a day, and if, unfortunately, the patient is subject to iodism and the different admixtures to prevent iodism do not prove satisfactory—and as far as I know none of them are reliable in all cases—do not experiment with them, but give the following pills:

℞ Lithii Iodati 1.50.....22½ grains.
Pulv. et Ext. Quassiæ.....q. s.

M. Et fiant pil. No. Viginti 20. Sig.: One pill morning and night; after some time three pills a day may be administered.

Iodide of lithium is very hygroscopic, and for this reason a good deal of solid mass has to be used in making these pills. They have to be kept in a well-closed bottle.

I have never seen iodism following the use of these pills.

Patients will at once, after the application of these leeches, feel free from pain, and this will be pronounced by them with great satisfaction after they have been annoyed with the pain for years. Under the anti-periostitic treatment by iodide of potassium or iodine, or, if these and other forms are not tolerated, by iodide of lithium, they will be well; perfectly cured, after a shorter or longer period of time, but we have to call their attention to the fact that, perhaps, the treatment may have to be continued faithfully for months.

These cases will give satisfaction in an exceptional way. Patients may have consulted many physicians, celebrated gynecologists, may have had heroic measures applied, and now they are relieved and cured by simple and most rational means.

My experience is that one can not induce the high-up specialist in gynecology, or any other specialty, to take notice of anything that is so simple and rational that it appeals to every-day common sense, as long as it is not in accordance with their own profoundly learned teachings, or as long as such a simple, rational affair has been overlooked by them because it could not be found anywhere in the elegant text-books.

But now I come to ask a great favor of the readers of THE MEDICAL BRIEF which is to give me a little divertisement and satisfaction.

Write your prescription for iodide of lithium as I have written it, and underline *flant* pillulæ, and ask your druggist what he says to it. He will, as it happened in my own experience, bring the large volume and show you *flat*=make, and if he does so, let me know, and I will furnish conclusive evidence that we have not to write *flat* pillula, but *flant* pillulæ. I should like to see the photograph of the man who wrote in the great book of pharmacopœia flat=make, and thus led all who do not know Latin into the absurdity to write flat pillulæ. We shall have a gaudium at the expense of the flat=make men.

[Written for the MEDICAL BRIEF.]

Acute Pulmonary Edema.

BY EDWARD C. ROTHROCK, M. D.,
Palestine, Texas.

In pulmonary edema, prompt, intelligent medical treatment is imperative if fatal results would be avoided. The great danger is in its sudden attack without any warning. The patient may appear quite well, or may complain of being unwell, or may be afflicted with some heart trouble, and a sudden attack of dyspnea is manifested, an untoward symptom that is seen in edematous lungs. Pulmonary edema may occur at any time under existing conditions, and at a time when aid cannot promptly be obtained, and may prove fatal from this cause; frequently the trouble is not recognized until it is too late to render adequate relief. Persons appearing in perfect health are suddenly stricken, caused by valvular insufficiency. The heart weakens under the strain. The kidneys are frequently a factor, interstitial nephritis, uremia existing to some extent, and may occur at any period of Bright's disease, generally in the advanced stages of that trouble. It occurs sometimes in pneumonia and other pulmonary diseases, and I have seen it frequently in malarial diseases. A malarial-pseudo-tubèrculosis, which condition is frequent in malarial countries. The condition presented is terrifying and extremely distressing. The sufferer is propped up in bed, supported by friends, gasping for air, suffocating, restless; trying to get relief by change of position; a profuse cold, clammy perspiration covers the body; a pallor, cadaverous cyanosed appearance is present; lips livid; eyes sunken and turned appealingly for help—for relief that, in some cases, can not be afforded by human aid. The pulse is rapid and weak; bronchial rattling, and moist râles are heard over the chest, showing the edematous condition of the lungs. Incessant hacking, dry cough, is present, with very little expectoration, and what little is expectorated is a whitish froth, which may at times be streaked with blood, but gives no relief. A dilated heart is often found in such cases, with a systolic murmur. Small arterial vessels are highly endowed with contractile and dilating power, and in relation to the capillaries regulate the blood supply to those vessels. This relation has the power of stimulating or sedating the heart's muscle by the existing condition of the arterioles, their contraction and dilatation producing blood tension, or lessen that condition, and is a force in the functions and frequently a factor in alterations that take place in the structures of the heart. By blood pressure, contraction of these vessels, the blood is dammed backward in the arteries. The heart is required to do double work to overcome the greatly increased resistance. This resistance, if continued, leads to hypertrophy of the heart. As sometimes seen in cases of arterial sclerosis, a loss of elasticity and rigidity of the arterial walls. Again the free dilatation of the arterioles sedate and lessens the work of the heart, as resistance is less, and by producing this condition causes rest in a dilated, feeble and exhausted heart. Therefore, the condition of the capillary area is very important; its influence is not only exerted upon the cardiac symptoms and conditions, but upon the other pathological conditions that are existing. Within the heart's structure is contained the power of automatic and rhythmic motion by presence of the cardiac-ganglia, this power, aided by the irritability of the cardiac muscular tissue. This action, rhythmic, is independent, to some extent, of the nervous system, but is controlled by the cerebro-spinal and sympathetic system and fibers from the vagus, originating from the fourth ventricle and upper cervical part of

the spinal cord, and causes inhibitory action. The acceleratory influence is given off principally from the cervical sympathetic fibers communicating with the vasomotor center in the medulla. The inhibitory influence slows and weakens, but conserves the heart's force. The acceleration increases the force rate of contractions of the heart, and may, if continued, exhaust its energy, and end in a complete collapse. Persons "broken down" by excesses are liable, as indulgence in alcoholic drinks, syphilis, chronic malaria, old nephritic cases, etc. Yet, in such conditions, a toxic influence exists, operating on a valvular insufficiency. Our attention should be called, and efforts afforded as soon as possible for prompt relief, and to use the drug or drugs that will relieve this untoward condition, and ward off impending death. Atropine is one of the best drugs for pulmonary edema; its action is exerted on the vagus; its terminal branches of the lungs. Atropine 1/60 to 1/100 grain, hypodermically, is frequently prompt to relieve, and should be used in small doses; repeated as often as necessary. It is a cardiac, respiratory and spinal stimulant to the entire motor center, dilating and increasing the capillary vessels, and equalizing the circulation, lowering blood tension. In large doses atropine has contrary effect; heart rate becomes rapid, arterial tension is raised and circulation rapidly increases by stimulating the sympathetic and paralyzing the cardiac, inhibitory ganglia. Nitro-glycerin is next to atropine, if not as good, used hypodermically, small doses, 1/100 to 1/200 gr. Nitroglycerin will relieve the spasm of the arterioles; is a vascular stimulant, dilating the peripheral vessels, regulating and equalizing the circulation, and lessening blood pressure, and thus prevent internal congestion by paralyizing the sympathet'c system, or vasomotor center, or both. Tumultuous action, spasm of the heart, is overcome by relaxation of its inhibitory apparatus. Hence pulmonary troubles, as cardiac asthma and pulmonary edema, etc., are frequently relieved and cured by the aid of the general circulation. Nitroglycerin and atropine are similar in some of their effects. Manifested in small doses, a cardiac stimulant slows the heart's action, strengthens its pulsations, causing deep respiration, a regular pulse and lower blood pressure by lessening of peripheral resistance. Atropine has a decided selective action over the respiratory centers in the medulla, quickening and causing deep breathing. Atropine could be used alone or alternated with nitroglycerin. In alternative treatment we get the effects of two drugs, which is often useful. Venesection — "bleeding" — has been recommended by some. We have never resorted to it in this disease. There are cases that can not be saved by any treatment, as the condition of the central organ is so debilitated by dilatation, valvular diseases, etc., that the heart will not respond to any stimulant. Remedies should be used hypodermically, as time is precious, and is wasted to give drugs by mouth. The stomach is slow to absorb and appropriate the remedy. Most of it can not be absorbed in the existing condition. By hypodermic, the drug has effect in a few seconds. By stomach, before the drug can act the patient may die. We have been very successful in treating pulmonary edema with atropine and nitroglycerin. If the heart's muscle is characterized by feeble pulse, frequent, irregular, intermittent, insufficient contractions, small and fluttering pulse, then strophanthin, 1/60 to 1/100 grain every ten minutes, hypodermically, until effect, then at longer intervals. Its action is manifested quickly; more so than drugs of its kind. It acts with great energy, and in small doses it is a powerful cardiac stimulant, increasing the force of the ventricular systole, raises blood pressure, and diuresis is produced. It acts through the blood direct on muscular fiber, increasing the contractile power of stripped muscles. Large doses will paralyze the heart in systole. It relieves dyspnea. Strophanthin is a charming remedy in failure of compensation, aortic regurgitation, valvular lesions, due to endocarditis processes and atheromatous changes. Strychnine is also a good drug in small doses, 1/100 to 1/150 grains. A stimulant to the spinal cord, reflex motor, vasomotor and sensory, dilates the pupils; a stimulant to respiration; increases vision; a tonic; aids digestion; increases peristalsis; gives tone, strength to the walls of the intestines. It has an affinity, selective action for nerve matter,

stimulating the multipolar ganglia in anterior columns; therefore, a powerful stimulant to the respiratory, cardiac, muscular and nervous apparatus.

In dyspnea from pulmonary troubles, cardiac failure, strychnin, in small doses, is often prompt to relieve. But even when medical aid is had early in the attack of pulmonary edema, a large per cent will die, for pulmonary edema tends to a fatal issue. Copious effusion of serum into the pulmonary tissues takes place, and not only into the inter-lobular spaces, but into the air cells, so that the patient's lungs are water-soaked, and is literally drowned in his own blood serum. Whisky, or other stimulants have, in nearly all such cases, been administered before the physician's arrival, but has done little or no good. The congested and edematous lungs still labor, and the churning, moist râles still continue over the chest, and suffocation is impending. Remedies can be given by mouth that may do some good, but resort may be had immediately to the hypodermic method of treatment. Prompt action is the motto in this trouble. Atropine is the mainstay; nitroglycerin can be used in alternation. If alcohol, ammonia, ether, or whatever drug is used, it should be used hypodermically, and used every ten or fifteen minutes, or every half-hour, as indicated, until effect is had, then every two or three hours.

The effects of the medicament should be continued indefinitely, or a day or two, if needed, until the safety of the patient is assured. We must not forget that the price of life is prompt and vigorous action in pulmonary edema.

[Written for the MEDICAL BRIEF.]

Sidelights on the Question of Diet.

BY AXEL EMIL GIBSON, M. D.,
Los Angeles, Cal.

The physiological center of exchange in and through which the hunger sensation of the cells are translated into self-consciousness is the medulla oblongata—the extraordinary agent which stands between the cerebral and the spinal, the psychic and the vegetative spheres of organized existence, constituting a self-adjusting relay station or switchboard for the exchange of the ceaseless rush of nerve impulses, arriving from the field of myriad functional operations.

Appetite is the medullic interpretation of hunger into terms of self-conscious appreciation. In other words, hunger is cellular vacui, due to nutritional exhausture, and has its psychic or self-conscious expression in sensations of desire for food—appetite. Hence it may be said that hunger is cellular (physiological) desire, while appetite is cerebral (psychic) desire; and while thus the former always gives rise to the latter—other things being equal—the latter may or may not indicate the presence of the former.

For while hunger springs from cellular needs, manifested in terms of capillary suction, and indicated in the presence of cellular vacui, *i. e.*, the actual need of replenishments for exhausted energy—appetite may be generated through the play of the mind on imaginary needs, thus giving rise to desire, which latter is to psychic, self-conscious nature, what cellular vacuum is to physical nature. But while cellular desire always expresses true needs, that must be filled, psychic desire expresses imaginary needs, that in most cases stand for mere vegetative luxury, and ought not to be heeded.

That psychic hunger, or desire for food, can give rise to the sensation of appetite, even in the absence of true cellular need, is due to the fact that the mind, through the power of imagination, can introduce tempting images of sensation, and thus generate a desire for indulgence, a desire which, while without the physiological basis of cellular desire, nevertheless can manifest in terms of physiological vacuum and suction.

It is this similarity, or, rather, identity of the metabolic and psychic phases of desire, that confounds the medulla oblongata. Induced to respond to the latter phase, she initiates impulses in the taste-cells and associated gustatory secretions, resulting in appetite, while the subsequent reflex impulse per pneumogastric nerve affects a flow of the requisite digestive fluids, without the metabolic phase being involved in the process.

It is under the stress of psychic desire that the human being has developed an appetite far in excess of his powers of di-

gestion and assimilation. From a saving genius, intended to guide the individual in selecting and partaking of the proper quantities and qualities of nourishment, the functions of appetite have arrogated a mind-and-reason-controlling power which, like the ancient dogs of Acteon—Acteon's dogs in the tale proceed to attack and destroy their own master. A slave to his appetite, the individual proceeds with a constantly decreasing power of self-control, to undermine and wreck the foundation of his physical existence. For while the food sent into the stomach, in response to the superinduced "psychic appetite," may succeed in starting adequate gastric secretions and subsequent digestion, it naturally fails to create a corresponding physiological need in the cells of nutrition. Being thus entirely uncalled for, and unwanted, this surplus of nourishment becomes a positive burden to the entire metabolic exchange, taxing the cellular operations to the utmost by necessitating processes of neutralization, isolation and final expulsion of the waste-matter from the system, involving the strain and stress of liver, kidneys, lungs and heart, and the irreparable losses of wasted nervous energy.

As "psychic appetite" is inducible at almost all hours, without regard to regularity or need, and with every gratification followed by the appalling train of functional exhausture, the stomach sooner or later will fall short in secreting the requisite digestive fluids. So far, however, from heeding the warning signal for the need of functional rest and recuperation, the patient, not infrequently acting on medical advice, takes recourse to a "tonic digestant" to whip the stomach into line with the morbid cravings of an insatiable gluttony. But, as in this case, the stimulation is of a wholly chemico-mechanical character, with no appeal to the medulla oblongata; it fails to invoke the aid of the "psychic factor," and hence is inadequate to elicit the secretion of digestive fluids.

A mere chemical irritant, the tonic can arouse no other response in the gastric activity than that of self-defense, resulting in secretions, not, indeed, of digestive juices, but of a defensive fluid intended to protect the epithelial covering and mucous lining of the stomach from the inimical presence of the irritating agent. A meal introduced into the stomach under such auspices will be subject to no other digestion than that due to mechanic friction in an alien non-digestant medium. And furthermore, as the aseptic condition of the ingested food is insured and maintained only through the disinfective properties of the hydrochlorid acid contained in the gastric juice, it at once becomes evident that the absence of normal secretions in a stomach charged with food will precipitate the latter into a state of fermentation, starting processes of decomposition in place of digestion, and cellular intoxication in place of assimilation.

It needs no extraordinary powers of imagination to sketch the picture of cellular and functional wreckage following the train of outrages thus committed against the sanity and sancitity of vital principles. After exhaustive, though futile efforts of the stomach to effect a digestion, the mass of infected food-stuff, reeking with bacteria, moves down the intestinal canal, poisoning in its course the succus intericus of the alimentary canal and associated vital chemistry of the entire metabolic exchange, inflicting incalculable damage to every function in the system. Inadequate to remove from their respective fields of operation the poisonous waste-substance thrown into the circulation, the organs of depuration, liver, kidneys, lungs, suffers a constantly increasing percentage of impurities to remain in the various tissues and viscera, retarding and endangering the execution of every physiological office in the bodily commonwealth, while the functions themselves are advancing toward ultimate breakdown.

The peril of the glutton is heightened by the highly-condensed food in which he indulges. For it is utterly out of the question for an individual, held captive by the modern commodities—the time and muscle-saving devices in home and office—to give rise in his physiological exchanges to wants and necessities that would even approximately justify the intake of such tremendous over-plus of muscle-heat-and-energy-yielding material as found in the quantity and quality of his daily food-consumption. The uric-acid-intoxication

of meat-eating; the hepatic congestion due to the highly condensed and artificially specialized form of nourishment contained in cheese, butter and oils; the physiologically considered, largely incombustible, because of nuclear or germinal character of the egg, which, similar to the whole family of grain and pulses, indicate existence in a stage of generative retirement, where the vital batteries of latent, but highly specialized energy, stand for embryonic nutrition rather than normal, post-embryonic diet. The, both quantitatively and qualitatively, excessive diet of our ancestors, while not by any means conducive of highest physical and mental development, had, nevertheless, the power of maintaining a metabolic balance, because of the bodily activity and extensive out-of-door existence to which they were compelled, by their crude methods of industrial exchange; and to introduce into our highly condensed and elaborate bill-of-fare the quantities of their dietary indulgencies, would result in no less a failure than to attempt to feed a modern wood-stove or compressed-coal-brick-heater with the roots and logs of green wood, which the old folks enjoyed to see burn in their open fire-places. Adjustment of the individual to his environment furnishes the sole guaranty for a continued progressive evolution, and any neglect in living up to this axiom leads inevitably, by the very law of life, to the arrest of life.

There can be no doubt that a great many of our hygienic and sanitary advisers have a large share in the nitrogen- or proteid-madness which lately has taken possession of the public-health movement. The people, especially the physically weak, are charging their digestive and assimilative powers with tremendous overplus of proteids, eggs, meat, butter, cheese, etc.—leading only to added waste, added loss and lessened vitality. And while nature, by constantly aiming at a restoration and support of normal processes, may, for longer or shorter periods, prolong the tragic spectacle of conscious or unconscious self-destruction, the final metabolic break-down is unavoidable, and the juggernaut of Bright's disease, diabetes, pneumonia or consumption, in the course of events will ruthlessly crush out the panting life-breath of the victims of vulgar self-indulgence.

Lately, however, light from authoritative quarters has begun to be shed on the subject. Professor Chittenden's investigation at Yale will prove itself to be a mighty lever toward a breaking down of false ideas in the philosophy of diet.

Beyond the shadow of a doubt this scientist has demonstrated that complete muscular efficiency, metabolic balance and uniform weight can be maintained only by a sweeping reduction of all the nitrogenous substances hitherto regarded as vital necessities for the virile and adequate support of active physical existence.

The theory, moreover, that a diet of fruit and vegetables is insufficient to maintain metabolic equilibrium, has no real basis in physiological chemistry and progressive assimilation. In his experiments along these lines, Voit found that a human subject, sustained during two weeks on an exclusive diet of carbohydrates, fruits and vegetables, was perfectly able to maintain the nitrogenous balance in his system, which proves beyond doubt the fact that fruit and vegetables contain sufficient proteid to meet any exigency arising in the unfoldment of vegetative life. The full power of a fruit and vegetable diet to sustain any phase or strain of physical activity has, perhaps, never been fully ascertained, though a chemical analysis of comparative food-values in fruit and vegetables published recently in *Journal Jardin d'Acclimation* (Paris), furnishes the statement that persimmons are found to contain no less than sixteen per cent nitrogen in the sum total of its substance. Bananas, pomegranates and cherries show twelve per cent; pears, eleven; apples, ten; grapes, nine; melons, cranberries, pineapples, eight per cent, and so on; which means that fruit alone has resources of nourishment which, independently of any other form of nourishment, can amply sustain and keep in perfect balance the assets and liabilities in the economics of human physiology.

Nor do we lack facts of practical demonstration bearing directly upon this subject. For not long ago a London lawyer, who is also a well known and quite successful novelist, published a personal

statement in the *London Lancet* concerning his diet, which, for no less than three years, had consisted entirely of apples—baked, stewed or raw. His only beverage was juice obtained from strained apple-pulp. He enjoys perfect health and vigor, experiencing a tireless endurance, as well in his professional as literary labors. In fact, he found his mind brighter than ever, and felt an increased power to successfully undertake great things. His experiments in exclusive fruit diet has certainly, so far, been a perfect success.

But the experience of the London lawyer is neither unique nor miraculous. Cases of similar character begin to meet us everywhere, and have a basis in perfectly normal physiological powers. In a recent copy of the *Vienna Tagelelatt*, that chanced to come under my observation, a description was found of a hermit in the Hungarian woods, who, for some months, under constantly increasing vigor of his mental and physical faculties, sustained himself on a diet of fresh grass.

Such departures from the ordinarily accepted code of diet merely go to indicate the presence of unsuspected resources of life-sustaining powers contained in the simplest forms and manifestations of universal nature. I heard once a chemist declare as his sincere conviction, based on personal observation, that the force latent in a glass of water, if atomically liberated, would suffice to move every wheel of industry in the City of Pittsburg. The secret and subject-matter of diet is not found in the quantitative, but in the qualitative; not in digestion, but in assimilation; not in an unreasoning abandon to the play of mere sensory impulses, but in the aim and object of reducing sensory and functional excitement into purposive life-promoting ends, and to translate the over-plus of saved vital energy into available storage batteries for future needs. The aim, perceived or not, of evolution, is toward simplicity of form and complexity of expression; the transmutation of quantity into quality; the systematic saving of labor, and the accentuation of its result, not merely in the sphere of physical industry, but in the sphere of mental and moral exaltation; in the sphere of dynamic balance between body and soul. For every momentum of energy, physical or mental, expended on the development of bodily powers, if not actuated by motives of universal, self-eliminating usefulness, means a growth of the body at the expense of the soul; means the inversion and living denial of the profound statement given to us by the sage of Nazareth, that "the life is more than meat, as the body is more than raiment." And it is along this line of individual evolution that humanity has gone astray, and lost its grip on the real issue of life, by becoming absorbed in the unessential and unreal. In identifying himself with his body, man has lost his consciousness of being a soul. His vital interests, in the course of his matterward departure, have become centered on the mediate and temporary; on the peripheral excitation and ephemeral thrills of sensory exhilaration. Passions, desires, appetites, etc.; in fact, every motion, good or bad, has its genesis and development in mental processes and attitudes. As the exercise of a physical organ responds in added growth, so a mental faculty, or corresponding desire, doubles and redoubles its strength by the very attention paid to it. In its larger cosmic process the essence of life holds suspended in itself as latent force, every impulse or emotion; every possibility of self-concious expression; and it devolves on the individual himself—on his attitude and receptivity to vital issues—if the formation of the composite streams of thought, feelings and emotions shall contribute to the rise or fall, the construction or destruction of manhood, will-power and character.

For every movement of the mind connects its owner with a principle or characteristic, corresponding to the subject-matter of the involved feelings. Thus, if permitting his mind to linger on the scenes and pleasures connected with eating, or any other purely animal functioning, anticipating and reveling in imagination over sensuous delights arising from the gratification of the morbidly swelling-appetites, the latter will grow and absorb all higher and purer impulses, such as self-restraint, moral will, altruism etc., until finally, when arriving at the coveted event, the individual will find himself swept off his moral basis, utterly inadequate to sustain his moral dignity and

self-respect in dealing with the temptations put in his way.

A desire is a conducting wire, by which the individual connects himself with batteries, generative of forces and emotions similar in character to those that agitate his own mind. To entertain a thought of envy, hatred, gloom, passion, desire, longing, etc., means thus to invite these powers to enter the council-chamber of the mind, and to subject his judgment and reason to their influence. The process is not imaginary; it induces the play of scientifically determinable forces and energies. Its formula is expressed in the simple statement that a mental attitude or self-conscious desire lays the mind open to the invasion of that very force by which the desire is characterized, while the ensuing action expresses the resistless burst of the mental energies already accumulated and fashioned in the mind during the preceding contemplation; the translation, so to speak, of idioms and symbols into the concretely and vitally applicable text of current comprehension. Hence to wrestle with emotions, arising from already generated force-centers is futile; our only safeguard lies in mental autonomy—the positive refusal of the mind to entertain any desire or emotion other than those in conformity with conscience and moral law. Regrets, self-chastisements, grief, remorse, etc., are all negative processes, whose modus operandi are to connect the prostrate mind with the object and source of its distress, and hence serve no other purpose than to widen and deepen old channels for further invasions of the devitalizing forces. Only one successful remedy is available; the mind off from the coveted subject! Sever the connection; tear down the wires of desire which place the mind within the disastrous reach of the alien force and imperils its safety. Personal desire is the wooden horse which the defenders of ancient Troy permitted to enter their besieged city, not suspecting that its gigantic limbs and trunks were packed with armed enemies.

The only successful campaign with an uncontrollable appetite, promising any success, must proceed in tactics similar to those by which Wellington once conquered Napoleon; the tactics of what may be called progressive retreat. Fight with an alleged stronger foe is fatal. An army once defeated, and with no reinforcements of any kind, will certainly continue to be defeated as long as the given conditions prevail. There are two ways, however, infallible and sure, ever open to the soldier of the passion-swept battle-field of the mind: to avoid engagement by positively excluding from the mind any thought or emotion connected with the foe, and a reenforcement of defense by establishing connection with the resistless forces of light and truth. And the philosophy of the process is not difficult to grasp. Any kind of fear or worry, no matter what the character of the motive back of it, is inevitably detrimental to development and strength. Moreover, as fear and worry are always concerned with self-interest, it follows that at the bottom of these devitalizing emotions is to be found a selfish motive, which ever leads to the isolation of an individual from sources of regenerative life. And from this it again must follow that a mind which deals with personal existence merely for the pleasures and gratifications it yields—its successes and failures; its hopes and fears, etc., while refusing to accept the larger life, the life of inter-social, inter-human progress as part of its vital equation—must result in a closure of the circuit for which it has been a vehicle, and the subsequent lapse of the body and soul into a state of lawlessness, confusion and dissolving friction, where moral force and determination of will is speedily degenerating into abject submission to the will-o'-the-wisp of every assailing temptation. For protracted selfishness must inevitably lead to a dissolution of the moral will with the subsequent break-down of our mental and physical nature.

A tremendous advance toward the attainment of will-power and self-control is found in the realization of the value of example as a fashioner of inter-social life —example not only in terms of physical action, but also as mental states. In the sphere of mind is no air-tight compartments, and no efforts, good or bad, in thought or action engendered by an individual, can fail to impart a corresponding effort on the life and destiny of the rest of mankind.

Plato was right: "Ideas rule the world." Passing from mind to mind, they transmit weakness or strength, defeat or triumph, to the thoughts and actions of men; and the realization of an individual, that his attitude and sympathies, in relation to a moral issue, may tip the scale of balance in the ominous moment of some fellow-sister's or fellow-brother's existence; sealing with terrible realism his or her moral or social fate, can not possibly fail to stimulate his mind to stronger efforts of self-control. I am my brother's keeper; not in act only, but in the far more potent sphere of thought.

Who doubts the terrible potency of thought and its fiery power to transfer everything it touches into its own element? Building or destroying, according to its character, thought constitutes the lever of human destiny, either raising the whole human situation to altitudes of vital and moral exaltation or sinking it to depths of soulless degeneracy and corruption. For, is it not true that before the glutton revels in his sumptuous, degrading living, he has first reveled in sumptuous, degrading thinking? And the damage and wreckage thus wrought in the world of mind; the moral contagion let loose in the motives and feelings of a defenseless humanity, depend for its deadly thoroughness on the moral receptivity or susceptibility of its victims. And as mental reactions are governed by the same principles as physical, the discharged thought-current will rebound with terrible energy on the mind in which they had their origin, sending the glutton still deeper into the mire of his bestiality, with the concomitant realization of sinking ever deeper into the clutches of raging passions and appetites. It is the monster, Frankenstein, turning loose its fury on the very author of its existence.

For, in the devolopment of the human will, through practices of altruism and high vital impersonal motives, lies the only guaranty for a continued evolution of humanity.

538 Byrne Building.

Inclosed find one dollar. Continue to send the BRIEF to my address. The BRIEF is good enough for me.—DAVID C. ROBB, M. D., Sanford, Fla.

[Written for the MEDICAL BRIEF.]

The Treatment of Rheumatism.

BY J. A. BURNETT, M. D.,
Dean Spring, Ark.

A good prescription in the treatment of rheumatism is as follows:

℞ Fl. Ext. Cimicifuga.....2 drachms.
Fl. Ext. Colchicum.....2 drachms.
Sodium Salicylate (true).....1 ounce.
Simple Syrup.....q. s.....6 ounces.

M. Sig.: One teaspoonful every two or three hours until the bowels act freely, and then every four to six hours as needed to keep the bowels active.

Cimicifuga is of value in most all forms of pains, and has been used alone with good results in many forms of rheumatism. It is a valuable alterative, and was Professor Marrow's favorite alterative nearly a century ago.

Colchicum is a useful remedy in rheumatism, when pushed to cathartic effect. When given too freely it will make a patient very sick. It has been used with success in many painful conditions.

Sodium salicylate is the most common remedy in the treatment of rheumatism, and will give good results in most cases, when a good preparation is used. The true sodium salicylate should be used, and not the synthetic product.

Another good remedy for muscular rheumatism is

℞ Fl. Ext. Arnica.....2 drachms.
Fl. Ext. Cimicifuga.....2 drachms.
Fl. Ext. Colchicum.....2 drachms.

M. Sig.: Three to six drops every two or three hours until purgation, and then every four to six hours.

Most cases of rheumatism can be benefited by good size doses of potassium iodide, after each meal, in addition to the other remedies being used.

Most all cases of rheumatism can be cured or greatly benefited by keeping the bowels a little loose with colchicum, giving large doses of true sodium salicylate and good size doses of potassium iodide. The diet, of course, should be carefully regulated, and the heart sustained with cactus, if needed. The use of superheated air is very important when proper apparatus is at hand.

[Written for the MEDICAL BRIEF.]

The Abbreviatory Treatment of Typhoid Fever.

BY H. TYLDESLEY, M. D.,

Member American Medical Association, Kentucky State Medical Association, Muhlenberg County Medical Society; Assistant Surgeon I. C. R. R., Etc.
Central City, Ky.

It is surprising to find how many errors are held regarding common diseases by many members of the medical profession.

Typhoid fever is no exception to this rule. It is commonly held by many otherwise excellent physicians that typhoid fever is in no sense capable of abbreviation. Another view is that typhoid fever is essentially and solely an intestinal disease.

While typhoid fever is regarded as, by the best observers, a self-limited disease, and while it is equally true that there is generally some intestinal lesions, it is far from truth to suppose that the morbid process is incapable of abbreviation, or that it is solely an intestinal affection. Hare, and the most able and conservative observers in the United States, and good clinicians in Europe, have concurred in this view. They believe the disease, by proper treatment, can be materially lessened in all particulars. They hold, also, that not only in the alimentary canal are we to look for lesions. They regard typhoid fever more as a general affection—having intestinal and other lesions as part of its process. In fact, the clinical history of the disease must lead all inquiring minds to this view. As a mere intestinal disease, all of the usual phenomena of the disease can not be rationally explained.

The abbreviatory treatment of typhoid fever does not consist in the employment of purgative drugs with a liberal hand. I believe in unloading the intestinal canal when necessary, but I believe that free purgation will often so sap the patient's strength that death will follow as a logical sequence. When I think there is an accumulation of fecal matter, I administer a saline. This is preceded by calomel only when there is evidence of biliousness. The abbreviatory treatment of typhoid fever consists in combating and preventing complications, and the conservation of the patient's resisting powers.

There is no drug nor serum that will bring the typhoid process to immediate termination. We must conduct the case so that the resisting powers will be crippled as little as possible. Let me view in order the problems that present themselves for solution in the average case of typhoid fever:

In nearly every part of the United States there is an element of malaria. This complicates typhoid fever very frequently. In fact, so often has malarial poisoning been found associated with typhoid fever that the disease has come, with many good practitioners, to be known as "typho-malarial fever." In the Southern States of this country this term is very generally employed. The best practitioners in these States use the term advisedly, because it means a common and distinctive morbid state, with which they are constantly in combat. In all cases we shall have to combat this malarial element, otherwise our patient will steadily lose ground. The remedy par excellence for this purpose is quinine. I prefer the hydrobromate of quinine, because it produces no tinnitus aurium, nor the nervousness that follows the employment of the sulphate. I give it in doses of five grains every four hours, and keep this up until I am satisfied that I can not prevent exacerbations of fever. I generally persist in the employment of the quinine for a week at least. Usually in this time the malarial element can be subdued.

High temperature entails great debility, and is most prejudicial to the patient. It is wise to control the temperature, if possible, and if it is kept below 102° F. the patient's best interests will be conserved. The means employed to accomplish these ends are antipyretic drugs and the baths—either cold or temperate. Antipyretic drugs are often the only safe means at our disposal for reducing high temperature. Often these drugs are needlessly employed, but I believe no capable, serious clinician would advocate their abolishment, or who would not say they have often proved a wondrously effective weapon. Very often having the patient sponged with tepid water will be sufficient to keep the thermometric reading low. But often we shall have to give an antipyretic drug. It has been claimed by some that the so-

called coal-tar derivatives have a depressing influence on the heart. But this is a statement which is largely untrue, and based on erroneous observations and hearsay. I have great faith in these drugs if they are used rightly.

Acetanilid, in doses of five grains, repeated every six hours, is a safe drug. The best observers among modern therapeutists will bear out my claims. I then use the tepid bath every four hours. If this does not reduce the temperature, I employ the antipyretics. A physician in a medical society told me that in giving antipyretics I only relieved a symptom, but I called his attention to the results which this unrelieved symptom would produce.

Intestinal antiseptics are valuable. I have found, after extended experience and experimentation, that no agent is more reliable or certain than salol, for this purpose. Three grains of this drug, administered every six hours, or oftener, if necessary, bring good results. Usually, when this drug is given in this manner, I find that my patient gets along without diarrhea and tympanites. The absence of these symptoms show me the value of this drug as an intestinal antiseptic, and I regard it as a very important agent in the treatment of the disease.

Stimulants *per se* are called for only when there is necessity to carry the patient through some tempestuous portion of the disease, or when the circulation shows irregularity or feebleness that is progressive. In such times we have a wonderfully effective agent—strychnine. Its action on the heart is quick, and it is reliable. In the prevention of failure of the heart this remedy is very valuable. When the cardiac irregularity or enfeebleness is progressive, or has obtruded itself upon the practitioner, the employment of strychnine will not prove satisfactory. In these cases we should depend upon alcoholic stimulants. Of these, brandy and whisky are generally the favorites. I continue the employment of the stimulants as long as there is any cardiac impairment. The dosage, both as regards the quantity of alcoholics and the frequency of administration, is to be adjusted to the requirements of the case in hand.

Cerebral hyperemia is a factor responsible for much lowering of the resisting powers. It induces headache, insomnia, convulsions, restlessness and consequential debility. To relieve this, tepid baths, repeated hourly, plus the internal administration of the bromides, are often very effective. In some instances of cerebral hyperemia the causative factor will be found to be high febrile action. In such cases acetanilid will be found a most effective agent. The application of cold cloths to the head, or the rubber coil, will be found very valuable in many cases.

Tympanites will rarely be present if we give salol, as already advised, but when this symptom manifests itself in aggravated form we shall employ turpentine internally, and apply the agent in the form of stupes externally. In some cases it will be found necessary to use a tube inserted far into the intestine to allow the gas to escape.

Diarrhea is due to dietary indiscretions, intestinal sepsis and other causes. These are to be corrected rationally. Bismuth and salol are the best general remedies to control the diarrhea. Opium, preferably morphine, is the best remedy in intestinal hemorrhage. It should be employed hypodermically. Ergot, tannic acid and other similar drugs are not so efficacious in intestinal hemorrhage as absolute rest, coupled with morphine.

Intestinal perforation is one of the gravest complications of typhoid fever. Without operation, it is universally fatal. In England and in this country, and on the continent of Europe, it is the custom to open the abdomen and repair these perforations in accordance with well-known surgical means. I think every case should be operated upon as soon as there is evidence of this condition.

So far I have said nothing about feeding. I am too conservative ever to allow my patients to have solid foods, as some advise. To my mind there could be no more serious mistake than to allow a typhoid fever patient to eat solid food. My own observation, that of Osler, and others, who give preference, experience have led to the deep conviction that only liquid food is to be employed. Milk, soup and soft-boiled eggs, and abundant water, are to be depended on constantly.

[Written for the MEDICAL BRIEF.]

Was Man Created Perfect?

BY REV. R. C. CAVE,
St. Louis, Mo.

Fifty years ago it was almost universally believed by the Christian world that, through a sudden and immediate exertion of God's creative power, man was brought into existence as a perfect being. The discoveries of science, bringing with them new conceptions of the divine methods, have caused many to modify, if not to altogether renounce, this old belief, but I think it is still held by a very large majority. A contributor to the March number of the BRIEF, who seems not disposed to altogether deny the doctrine of evolution, says: "As to whether God created Adam out of the dust of the earth, or whether He created a single primordial germ, or ten thousand of them, and developed Adam from the best of the lot, is of little consequence to us. We must assume that if God created man, or had anything to do with his creation, the result must have been a perfect and holy being." Why must we assume this? It seems to me as reasonable to assume that, if God had anything to do with the creation of a reptile, the result must have been a perfect and holy being; yet perfect and holy are hardly the adjectives we would use to describe some members of the reptile family. If the fact that God created something carries with it the conclusion that the something must have been perfect and holy, all things, from the most lovable to the most loathsome, must have been made perfect and holy; for all were created by God. But the discoveries of palæontologists have pretty conclusively shown that some things were not made perfect, to say nothing of their holiness. For instance, it can not be truthfully said that the oldest known animal of the equine type, the fossil remains of which have been found in the Eocene formation, was a perfect horse; for discoveries have revealed an ascending series of animals of that type, reaching from the ancestral form to the horse of the present, and showing gradual modifications of structure, from age to age. Instead of creating a perfect horse to start with, God made an equine animal with toes, instead of a hoof, and gradually evolved the horse from it. May he not have proceeded similarly in the case of man?

If, denying a similar procedure in the case of man, we claim that he was made perfect in the start, how can we account for his loss of perfection? The writer quoted above accounts for it by saying, in substance, that a principle of evil, of which "that old serpent, the devil," was "a sort of incarnation," existed in man's heart and tempted him to go wrong. But this, it seems to me, is an admission of man's imperfection. I am unable to see how a being with an evil principle in his heart tempting him to do wrong, can be perfect and holy. I can not conceive of God, the Perfect One, as having an evil principle in his heart, or as being tempted in any way. "God can not be tempted with evil;" and, if man was created perfect, he must have been, like God, above the reach of temptation.

Even the Bible account of creation, fairly considered, refutes the doctrine that man was made perfect. Instead of representing him as a fully-developed and perfect moral being, it tells us he had no knowledge of good and evil. When we can truly speak of one whose moral consciousness is wholly undeveloped, and who is so weak morally that he can not hold his own against the slightest temptation, as morally perfect, then, and not until then, may we truly say that the primitive man of the Bible was perfect.

The impartial student of history and nature can find nothing on which to base the belief that man was created perfect, and fell from his perfect state. On the contrary, he finds that, "Evidence points only to a primitive creature, without fire, clothes, language, tools, or houses; and with only this advantage—a dawning consciousness of his needs and wretchedness."

To the honor of his Creator be it said, that man, instead of falling below his first state, has risen above it. He was not first spiritual and afterwards animal, but first animal and afterwards spiritual. He began at the lowest point in the moral scale, and has slowly risen to his present moral condition. In all that goes to constitute true manhood, the man of to-day

is ages in advance of Adam, and incalculably nearer to perfection than the primitive being whom theologians describe as a paragon fresh from God's hand, with the stamp of divine excellence on his brow.

And I think we have reason to believe that man's progress will continue until he reaches the full measure of the stature of perfect manhood. If the writer from whom I qnoted in the beginning of this article will change his tense, and substitute "will be perfect" for "must have been perfect," I shall not feel disposed to take issue with him.

3926 West Belle Place.

[Written for the MEDICAL BRIEF.]

Suggestion, Violated Nature's Remedy.

BY ROBERT GRAY, M. D.,
Pichucalco, Chiapas, Mexico.

Nothing else calls up the furies from the abyss in the chastisement of perverse humanity so fast and unsparingly as violated nature. The counts in the indictme-t our common mother prefers against us are too familiar to the profession to require recapitulation. Every doctor knows more or less of their prolific harvests, many times to his regretful despair.

Our most rebellious and destructive diseases are but the mature fruitage of violated nature, as we are all beginning to learn and appreciate.

Yet the grave problem that confronts us at every nook and turn is not that involving remedies to dominate sequent disease, but, rather, that of preventing the gross violation of nature that produces the current ailments of mankind—vices that, if not actually popular, still such as are practiced with open impunity without shame—needless to enumerate as the profession understands them and realizes their consequences too sadly well.

This truism seems to be old as the everlasting hills—bequeathed from sire to son of ancient days, the sages and law-makers of the Israelites having known its pernicious dangers.

One of the ugliest vices in my long tropical experience, and one impossible to medicate successfully is that of eating dirt, salt paper or cloth, and very extensively practiced in tropical countries.

I treat it among children under ten or twelve years by the terrible influence of burying them alive; going to the extreme in the more obstinate cases of actually arranging a box in the house and impressing them with the conviction that the mere glance of my eye will detect the truth if the least particle of the favorite substance has been partaken. The effect is almost always magical, and the cure prompt and permanent. The only medicine is broken doses of podophyllin comp. and strychnine arsenate—laxative and tonic treatment. Possibly one in twenty baffles my every effort. But nothing else gives such cheering majority of victories.

New rum is another vicious article that prepares much trouble for all tropical practitioners; inebriates nearly all dying with well-developed pneumonia; the only show to save them being the abortion of the disease at its inception; not overdifficult, according to my experience, with aconitine progressively administered to saturation, such dominating influence being sustained by occasional fractional doses, with sufficient time between each; all of which the doctor on the battle-ground must determine, as I have found it impossible to establish any rule of practice otherwise for myself; two identical cases rarely obtaining.

I have been unable to cure permanently any current vice or habit by medication, and doubt seriously the contrary pretentions of others. Any treatment beyond the application of eliminative and tonic medication is practically worthless, save alone that of suggestion.

Here we stumble up against the grand majesty of mystery in the artful science of combating any violation of nature and relieving its consequences. Personal influence of irresistible power will win where drugs are our despair. I am master of the requisite degree for dirt-eating tots as stated, the susceptibility of the young and delicate minds being an auxiliary of inestimable value that renders them helpless in the presence of the ghastly specter of remedy. Naturally, a higher grade and more refined form of persuasive influence is necessary for adult transgressors.

I have found that there always remains a germ of primitive goodness, no

matter how seemingly beyond hope, inert in the shut and guarded bosom of the worst man or most depraved woman it is sometimes our lot to treat. To discover and probe to the quick the lethargic spot is the baffling secret that, alas! is too often beyond my ken. Once open, the victory, while uncertain, is still possible.

Those masters of suggestive therapy who are specially gifted or consummately trained by constant and assiduous practice should have much less trouble than what is my lot; with my time so imperatively demanded by the victims of tropical fevers, I am unable to indicate to masters what I, as an obscure student, do not understand sufficiently to employ successfully myself, while my limited experience amply justifies my faith that suggestion, ably manipulated, is the remedy for any vice or vicious habit, because I have attained some brilliant cures of almost every pernicious vice in the decalogue; too few, however, to permit me to pose as a practical authority.

It is probable, nevertheless, that with uninterrupted attention and persistent application I might cure more difficult cases than I have been able to dominate.

One great aid is the debilitated minds of such patients, the practical absence of self-will power, that renders most of them apt and pertinent subjects, readily pliable to the ruling sway of skillful suggestion. This is the cornerstone and foundation of my faith: that proper suggestive treatment will cure almost anyone whose physical anatomy has not been destroyed beyond redemption.

The attention of such a subject once arrested and held spellbound by a superior influence gradually yields, even with reluctant unconsciousness, and, little by little, surely, however slowly, the restraining sway gains the ascendancy in a degree that the patient obeys implicitly the mandate of the suggestor.

I am persuaded that there may be no definite limit to the possibility of suggestion, while it seems to me that there are spheres of suggestive power, some practitioners being peculiarly gifted with faculties far outstripping their humbler brethren, and that there are several grades of patients, some the less skillful suggestors can not benefit that those endowed in higher degree can influence propitiously.

As a matter of course, the science of suggestive therapy is, as yet, embryonic, though gestating by rapid process of development. If we have a true story of the healing powers of Christ, he was, probably, the only perfect master of suggestive medication the world has ever known.

Where the church dominates public sentiment or superstition wields a guiding sway over the ignorant, I have been able to draw coloring influence from Milton and Dante sufficiently powerful in allegorical figuration of the horrors of hell, and the sure destiny of the slave of vice to suffer all the dire consequences; such entail to deter the patient almost as effectively as the coffin and grave serve the turn of restraining dirt-eaters. But all this subterfuge of hell fire, the powerful leverage of the church in other days, is now obsolete and futile with more than half the Christianized world, the very priests of Rome, in many cases, and numerous Protestant preachers repudiating the doctrine, unfortunately for the cause of curing the vicious with such a remedy.

I am in a consistent Catholic region in every respect save alone that of a future life, the existence of a living soul in the clay tenement of man, which is almost unanimously denied; an unaccountable Christian inconsistency which negatives my favorite medication almost absolutely. I am unable to understand why such people baptize their children and go to confession under the conviction that all ends with the last gasp of this life.

Occasionally, when I have time, I play the role of preacher, and have persuaded several that the side of faith is the safer stand, and harmless, if untenable; yet such is not the proper province of the physician; nor has he, probably, any right to employ the thunder of the church as auxiliary medication, the treatment of vice being really the legitimate function of piety; yet it has drifted into or been adopted in the field of medical practice, where I do not scruple about the right to weapons with which I strive to combat its ravages, that send more than half of those who die in my field to premature graves.

But I desire to urge the profession not to confound the noble, almost divine prac-

tice of suggestive influence with basely groveling hypnotism, the anti-Christ of our sublime science of suggestive therapy, that is endowed with an inspiration and a faith above and beyond vulgar carnality, who knows in what degree of possibility? I, for one, vote against any measure of skepticism. I sometimes fancy, at least, that the dominating will-power of suggestion exercises a spell of enchantment over the spirit of the patient, through the solar plexus of the brain, and sets that inert element to repairing the dilapidated—may be disintegrating—anatomy, resulting in magical relief and miraculous cure to rival some of the attributes of Christ in the mere healing art.

Anyhow, and every way, the subject merits our profound study and earnest practice. We can not afford to ignore it. We are, for the most part, too liberal, too intelligent, too practical, too progressive, to scoff it. There is too much evidence of preponderating credibility in its favor—witnesses of the first rank in the profession. If we have faith in the science and can impart our faith to our patients in a responsive degree, some wonderful results may yet surprise the natives, whether of stupid or brilliant intelligence. I tell the more ignorant peon patients that the devil is present to carry them away, and that my province is to baffle and drive him out empty-handed; a certain victory if they will heed and obey me implicitly. Naturally, I do not omit what I regard as proper medication, striving to impress them with the conviction that any medicine administered should accomplish a desired modification of their affliction.

Somehow or other I fancy that my words and my medicine harmonize. Anyway, the result often surprises me in cases regarded as hopeless under every aspect of prognosis.

Destroyed by Fire.

The well known business house of Kress & Owen Company, New York, was visited by a serious conflagration, which practically destroyed their plant, but the same push and energy that has always been displayed in their business, overcame any serious delay in furnishing their goods. They can meet all demands for goods, and have thus established a record that is enviable.

[Written for the MEDICAL BRIEF.]

Blisters in Pneumonia.

BY P. C. SUTPHIN, M. D.,
Canmer, Ky.

In the March issue of THE MEDICAL BRIEF there appeared a well-written and instructive article on Pneumonia, by Dr. Robert C. Kenner, of Louisville, the able and popular editor of the *Therapeutic Record*, a medical periodical somewhat recently established by him in the metropolis of his State.

Assenting to all that Dr. Kenner said in regard to the efficacy of his treatment in pneumonia, yet as he says of blisters, in the treatment of it, that he does not "frequently use them," as "interfering with the examination of the chest" and "opposed by many patients," so they should, according to this, be rather dispensed with, when possible, in our management of this disease.

But whilst this objection to the blisters, as urged by Dr. Kenner, is worthy of all consideration, and more especially as emanating from a source so learned and competent as himself, yet I would state that I have derived much advantage from their use in pneumonia, and, therefore, have been in the habit of regularly employing them in my treatment of this disease. I do not say that they are a *sine qua non*, or necessarily always indispensable in the treatment of it, as Dr. Kenner and others have shown them not to be, though it may be said that for the very long period, now, they have been held in the highest estimation by prominent and distinguished medical men of all enlightened countries for their superior efficiency and value in treating pneumonia. Carrying out the principle that "where the greater malady is fixed the less is scarcely felt," they, by producing it, may be a greater inflammation on the exterior cutaneous surface, than that just within; in this way draw the inflammation out, so to speak, from the lungs, where it may be difficult or impossible of cure, and transfer it to the external surface, where it could be both readily reached and cured. This, it may be said, is rather a savage way of treating disease; or, on the Indian plan of treating

chronic ulcer of the leg by turning it into a burn, and then curing the burn; so it is, however, the doctrine of *similia similibus curantur* can not, in such cases, as yet, be discarded as altogether a "thing of the past," and as such, to be "relegated to the rear." It was some fifteen years ago that I was called in consultation in a case of pneumonia with an old and able practitioner. The patient was a prominent and wealthy citizen, and probably some sixty-five years of age. When I saw him he had been waited on for some days by his attending physician, but gradually grew worse, till his condition seemed to hold out but little hope for his recovery. Dr. A., his physician, gave me the details of his treatment in the case; all of which was altogether intelligent and appropriate, and to which I told him I could add nothing but a blister to the surface of the affected side. To this he assented, and accordingly the blister was duly prepared and applied. I paid him but the one visit, but learned that after the action of the blister he began at once to get better, and soon was well. Seeing him after this, he told me that he never had anything to do him as much good as the blister; that as soon as it began to "draw" he felt better, and continued so until he got up. He was certain, he said, that it saved his life, as nothing before that had done him any good. It is probable, however, that the treatment of his case before that had all due effect in staying the disease, at least, if it didn't cure it, whilst all that was needed was the blister to give it the "finishing touch," and thus complete the cure.

As before said, I have been in the habit —and, I may add, since my earliest practice, now a good many years ago—of employing blisters in my pneumonia cases, with the result that I have always had superior success with them, and have often seen the disease more or less readily yield to their action, when other treatment, by internal medication, had little or no effect on it. It is true, as Dr. Kenner observes, that they interfere, to a greater or less extent, with the examination of the chest, by percussion, more particularly, however, though, whilst this is so, yet as the condition of the lungs can be fairly tested in other ways than by percussion and auscultation, when these are interfered with—that is to say, told by the pulse-beat, bodily temperature, breathing, etc.—so the more direct examination of the chest under the circumstances of the blister; the latter, it may be of especial value in the case—I say this examination might be better under these circumstances; give place to the higher good that might be done without it by the blister.

In regard, further, to the use of blisters in pneumonia, I would state that I have employed them in cases of the old and young, excluding, however, infants, and never failed of good results from their use. I remember using them once in a case of double pleuro-pneumonia in an octogenarian lady; applying the blister to the left side first, which soon drew the inflammation without, leading to a beginning cure of that side. Thinking that blisters on opposite sides, at the same time, might prove antagonistic, or, rather, fighting each other, and thus do no good, I deferred applying the blister to the right side for several days, trusting to internal treatment in the case; whilst, however, that side still continued bad, with no improvement in its condition. Now applying the blister to it, it soon, under its action, began to improve, as with the other side, and in a short time was the source of no further trouble.

So much, rather, in the way of the *breviter in modo*, as to the blister in pneumonia, as looked at from my standpoint of view. Of course, I could not, in the mere paper like the present, go into any *in extenso* details or mention of it, such as quoting from writers on the subject, citing the favorable opinions of medical friends in regard to it, or presenting further views of my own as to it, though viewed from the standpoint of proof and efficient service, the blister, so far has stood as one of our most potent agents in the treatment of pneumonia.

In concluding this imperfect paper, I would state that none of it was designed in the way of criticism of Dr. Kenner's very excellent and instructive article, but simply to present my views, in kindly little issue with him, on the subject of the blister, which latter, he thinks, as interfering with the proper examination of the chest, should be treated with suspicion, as

in that way it may be doing harm rather than good. Of the rest of Dr. Kenner's paper, in the meantime, well written, lucid and practical, it furnishes a most intelligent and efficient guide to us in our treatment of pneumonia.

[Written for the MEDICAL BRIEF.]

Neuroses.

BY W. T. MARRS, M. D.,
Peoria Heights, Ill.

A neurosis is an affection whose cause is unknown, or of obscure origin. Scientists and pathologists are disposed to regard as unimportant those diseases in which diligent research has failed to discover an anatomical basis to account for them. As a matter of fact the scalpel, reagent and microscope have failed to give us much information in the troublesome class of ailments known as neuroses. The search for causative factors in neurotic conditions is always a tentative procedure. There are many and varied conditions to be investigated. Heredity plays the strongest role. Next the patient's occupation, habits and general environment need a careful scrutiny. There may be constitutional derangements at the bottom of many stubborn neuroses. Among these are constipation and auto-toxemia, abnormal constituents in the urine, and in general a disturbed or perverted metabolism. Causes of a more direct reflex character are worms of the various sort, gall-stones, eye-strain, uterine affections, adhesions, mechanical pressure, etc. In the typical neuroses and psychoses none of the abnormal conditions named are likely to be present. The fact that no cause in the way of a distinct entity can be found in any given case should not deter the physician from giving the matter painstaking attention. It should be borne in mind that the symptoms are *real* to the patient, whether they be scientific or not.

Hysteria is one of the most striking examples of this type of affections. As hysteria is very rarely written on a death certificate, many physicians are disposed to treat these cases with good-natured contempt. It is true that the correct management of such cases involves much study, but, after all, they deserve careful consideration in view of the grave sequelæ that may ensue, as well as the damage to posterity. It is at the crises of a woman's life that this condition is most manifest, *e. g.*, puberty, marriage and the climacteric. If the woman has not judicious treatment she may suffer more or less all her life. If she continue to bear children while in this state of nerve instability, the same nerve impress is likely to be stamped upon her offspring. Hysterical patients whose antecedents were highly neurotic are prone to become victims of insanity. In the treatment of hysteria little medicine should be used. These patients are very easy to acquire drug and medicine habits, and the constant taking of something has a mental influence that helps to perpetuate the trouble.

Neurasthenia, hypochondriasis and melancholia are only functional conditions, but they may be accountable for untold suffering. They are conditions in men that are almost analagous to hysteria in females. There may not be discernible anything to account for the patient's aches and vagaries, but we have no means of measuring subjective symptoms. We can not deny the fact that the patient suffers. In the way of treatment, if we can but prevail upon them to let quacks and quack literature alone, we have accomplished much good.

Migraine may usually be regarded as a neurosis, notwithstanding the volumes of wisdom that have been written on this subject. In nearly every case of severe headache recurring with some degree of regularity, there is to be found a family history in which the nerve element showed decided impairment. The paroxysm attending migraine relieves pent-up energy in certain nerve cells and centers, and the victim enjoys comparative freedom from pain until another attack recurs.

Epilepsy is, in its incipiency, to be classed in the same category with migraine. It is true that sometimes in epilepsy we find distinct reflexes that may be put down as factors of causation, but if there were not inherent tendencies of psychic origin it would require a powerful reflex to produce a nerve storm in the way of an epileptic seizure.

The remarks concerning epilepsy apply with about the same accuracy regarding chorea. Both are neuroses, at least in their incipiency.

Nervousness, insomnia, ill-temper, despondency, pessimism, etc., may hardly be dignified by being called disease symptoms, yet they are unnatural, and, therefore, unphysiological. They may make one's life as miserable as actual disease.

The treatment of the class of affections so briefly outlined in this article may involve a therapy that is far-reaching in scope. Certain functions may need correcting. In many cases the general health is not at fault. The environment must be made as congenial as possible. The old stereotyped medical advice, viz.: To quit everything now indulged in, and do the very opposite, here finds a certain degree of favor. The employment should, so far as possible, be along lines suited to one's preferences. Appropriate literature may serve a good purpose. On the whole, the patient must be educated into a new way of living and thinking. He must interest himself in things in a way that will cause him to forget himself and his own importance, at least for a part of the time. In all neuroses psycho-therapy may be used to great advantage. Its employment as a distinct remedial agent may not be so well accomplished as by a vein of it incorporated with all methods and measures. In no other class of ailments can the agency of the mind in some way be so successfully employed.

[Written for the MEDICAL BRIEF.]

Physical Exercise.

BY H. D. FAIR, M. D.,
Muncie, Ind.

The health and usefulness of our material bodies and the happiness and serenity of our lives, to a certain extent, depends on effort (exercise), which may be defined as labor or exertion. The latter may be either physical or mental, and applicable alike to the brain or muscles of the body.

Exercise may be considered under three general divisions: that which is an essential factor in the earning of our daily bread (labor); that which may be employed or forced for the purpose of accomplishing a certain object (gymnastics), and that which is taken as recreation (play). An agreeable change of occupation may temporarily, and, to many persons, does, take the place of recreation.

In order that symmetrical development and harmonious functions result from such exercise, each and every muscle in the body demands its full quota of work. Spasmodic attempts should not be encouraged, and protracted effort along particular lines only are never satisfactory. We may admire the blacksmith's strong right arm, or the muscular calves of the bicyclist, but they may belong to one-sided individuals; the former may have weak legs, and the latter a flat chest. The beautiful body is one that is equally developed in all its members. No part should ever be conspicuous because of either deficient or excessive development; therefore, the forced exercise should be that which best calls into play the muscles previously left inactive, because of the peculiarity of the ordinary daily routine, and this object should be kept in view when the selection of supplementary exercise is made.

The person who sits all day at a desk or operates a bench machine should take long walks before going to bed. The individual whose occupation enforces a cramped position, should, whenever opportunity presents itself, attempt over-correction; that is, the opposite extreme should be employed, for, in this way, the body is stimulated or assisted in the effort to maintain an equilibrium when in a state of repose.

The great advantage in learning to have the right and left hand equally skillful and completely under the control of the will, needs no argument to demonstrate. I believe all children should be taught to use both hands, either when writing or at work; this not only makes the individual more proficient, but frequently accidents happen depriving one of the use of the right hand, and in which the degree of helplessness would be much less had the unfortunate one early learned to use both hands equally well.

No person starting in on a course of gymnastics should attempt to keep pace with a well-drilled class. All stunts should be progressive. The point of mild fatigue

should never be passed, especially by the beginner.

For those whose duties are such that an additional routine in gymnastics is advisable, an expensive or complicated apparatus is not essential. A broom-stick or a kitchen chair can be used to good advantage. A horizontal bar, either swinging or stationary, can be conveniently arranged with little or no expense. Two long-necked bottles, like those used for beer or champagne, partially or completely filled with water or sand, make satisfactory substitutes for dumb-bells or clubs.

Circulars describing the various exercises and illustrating the use of apparatus can be procured at stores where gymnasium or sporting goods are sold, or may be ordered through your druggist or stationer.

[Written for the MEDICAL BRIEF.]

Bacteria Germs or Bugs Are Not the Only Cause of Disease.

BY ALFRED J. WEED, M. D.,
Granby, Conn.

Germs, bacilli, or invisible insects, as they are sometimes called by the laymen, are of less active danger to human beings than one other producer of morbid conditions—the mind.

With a good, robust mind, which is of itself antagonistic to disease in a vigorous body, one may laugh at a million germs or bugs, for they are harmless, except nourished by conditions suited to their growth, and these most favorable circumstances only are allowed to exist because of the absence of the acts of a good mind.

When one thinks disease, look out for danger. A scientific physician—and, deplorable as it seems, not all assert—well knows and will have to admit the fact to his friends and patients, and, accordingly, teach such as are willing to learn.

People are very slow to accept this fact, this well-meant advice, and to profit by it, and this seeming indifference may come from a feeling that the fact is not sufficiently proven, yet in such a case the person receiving such advice must consider the professional advice as coming from one able to know even if absolute proof is wanting. Things, oftentimes, must be accepted as facts, in the absence of absolute proof. Where two theories are advanced and neither absolutely proven, the people must cleave unto that which seems most plausible, eschewing the others; therefore, when a professional man proclaims one theory more logical than the other, why, we must accept it.

If a thought can, in an instant of time, hasten or retard the action of the heart, if it can dilate or contract the blood vessels, causing a rush of blood to or from any part; can increase or diminish the secretions of a gland, if it can turn the hair gray in a single night, can force tears from the eyes, can produce great bodily weakness, even in a twinkling of an eye, yea, even carrying instant death, then why is it not logical to conclude, without argument, that it may produce derangement, even continued derangement of the physical organism, which we call disease.

Instances are many where the acts of the mind not only produce disease, but it perpetuates it. Indeed, in the experience of any busy practitioner of medicine, can it not be said that many morbid affections are caused by the acts of the mind? Even the majority of cases of illness are produced, alarmingly, by the thoughts. It is not unusual for some one returning from the funeral of a loved one to be taken ill and, in a few days, to follow that one to the grave. We ask, What is it that causes this death? Depressing thoughts.

A mother hears of some terrible calamity having befallen her child. She goes into a collapse, fever follows, and that mother may, for days, linger even unto death.

A man is seated at a banquet table, full of health and happiness, blessed in every way, his face beaming with exquisite pleasure and good cheer. A message is brought to him that his wife and little ones have been drowned in a flood. He turns pale. His beaming face is now as white as death. His appetite has departed. He falls from weakness. All the functions of the body are deranged. A doctor is called and the disease is diagnosed. But is it not the fact, is it not true, that the diseased condition was the result of what he thought? Possibly, some

will say that some organ in that body was in a morbid condition, and the pathological process was dominant, as far as progressiveness was concerned. Even so, were it not for the overwhelming effect of that terrible mental impression, the man may have survived for many years; therefore, the power of the mind over the body was the immediate cause of death.

A fit of anger will cause the most wonderful train of symptoms. After such a condition has operated, the functions of the glands are impaired. Many instances I have observed where an infant nursing its mother just after she has been engaged in a violent quarrel will become ill, and even die.

Every wise physician has many instances which he might recall where the mind has great effect on the body, and it seems to me a fact beyond the peradventure of a doubt that if impressions of the mind produce such results as herein mentioned, the same mind may, if continued morbid, be a producer of disease, even more of a producer than a million germs floating in God's clear air.

[Written for the MEDICAL BRIEF.]

The Proper Diagnosis.

BY E. B. HOUSE, M. D.,
Washington, D. C.

"Good morning, my friend," said old Doctor Wise,
As he took off his specks and mopped out his eyes.
"What's the trouble this morning, with you, Mr. Jones?
Is it your stomach, your back, or your bones?"
Mr. Jones, racked with pain, not a little surprised,
Began, in this manner, to tell Doctor Wise:
"My head is near bursting, I scarcely can see.
Now, Doctor Wise, what's the matter with me?
Is it the measles, the mumps, or the gout?
That's bothering me so?" Mr. Jones yelled out.
The Doctor, harassed with a little distress,
Said: "You see, Mr. Jones, we doctors don't guess.
And before I can venture to positively say,
You'll have to wait for one more day."
Mr. Jones closed his eyes with silent content,
For he knew Doctor Wise always said what he meant.
The morrow arrived, and the Doctor, so true,
Returned with his satchel to see the case through.
The patient was aching from his feet to his head,
And declared to the Doctor he wished he was dead.
The Doctor inquired: "Have new symptoms appeared?"
And when told that they had, said: "It's just as I feared.
Your tongue is all coated, your pulse ninety-four,
But before I can tell, I'll have to know more.
Is your appetite good? Do you sleep well at night?
Are your nerves unstrung? Do your kidneys work right?
Your respirations are twenty or more,
And it seems that that cough would make your chest sore.
And you say that you vomit just after each meal,
And the sores in your mouth refuse to heal.
All right," said the Doctor, as he arose;
"I think by tomorrow I can diagnose.
For surely by then the case will be clear.
Rest easy, my friend, and have no fear.
Take no more of those powders; no more of those drops,
But go on with this till your headache stops.
This opiate will relieve all your pain,
And none of that cough, I'm sure, will remain."
"But, Doc," said the patient the following day,
"The name of my ills you have failed to say."
The Doctor looked wise, as he reared back his head:
"You ought to be thankful, sir, you're not dead.
But, to tell you the truth, without disguise,
I don't know," said good Doctor Wise.
"But this much I'll say, and say without fear,
Had you not sent for me you would not be here."
The patient relapsed into silent repose,
And gained by the rest of a short little dose.
And when he awoke he was there all alone;
Our friend, Doctor Wise, had departed for home.
And when Mr. Jones went down with a will
To pay Doctor Wise his little bill.
He asked how the Doctor had managed to save
Such a sick man from an early grave.
Doc said, with a smile: "To keep men from dying,
All that we do is to keep on trying.
I gave you hypnotics to settle your brains;
To keep you quite still and ease off your pains.
You had not rheumatics; it was not the gout,
For salicylates always drive such things out.
It wasn't a fever; it was not the chills;
For it didn't respond to those quinine pills.
I gave you some pepsin; some calomel, too;
And if you was bilious, that pulled you through.
Those strychnine tablets were for your heart,
And toned your system from the start.
The arsenic and iron were for the blood,
And, no doubt, did a great deal of good.
I gave you the bromides, for you was unnerved,
And I'm sure that they their purpose served.
And now, Mr. Jones, the next time you're sick
Send for Doctor Wise, and he'll do the trick."

[Written for the MEDICAL BRIEF.]

Absorbing Uterine Tumors.

BY J. A. HOUSER, M. D.,
Indianapolis, Ind.

The development of surgery has been so great and rapid in the last few years that it has crowded medicine from some territory justly its own. Indeed, this is the age of ripping women up, and many a one goes under the knife who would fare far better in the hands of the physician than on the operating table. With some surgeons the desire to operate becomes a mania that none but the strong, cool, well-balanced mind can control. Time was when the French surgeons were the butt of jokes and subject to derision because of their thoughtlessness and recklessness in the use of the knife. France monopolizes this opinion no longer; American surgeons are at least dividing such surgical honors.

Many of the tumors removed by the knife, often with anything but satisfactory results to the patient, could be successfully treated by the physician. I have no hesitancy in declaring my confidence in the belief that at least eighty per cent of all uterine tumors can be absorbed entirely or lessened and the growth permanently checked by medical treatment. This I have demonstrated in the treatment of such growths for many years. My experience is only a short story of treatment, neither intricate nor varied. But a few conditions must be observed. Not only the kind of tumor must be taken into consideration, but also the temperament of the patient, since the remedies I use can not be taken in the same way by patients of different organic condition. My sheet anchor and that which I use in some form, is potassi iodid and mercury, generally the bichloride. The nervous, delicate woman, with a weak stomach, will not always tolerate the iodid, but, combined with the bichloride, often fattens on it, while the patient with the sanguine temperament can not long tolerate mercury in any form, at least harmlessly, unless safeguarded by an alkaline. The billious temperament, with black hair and yellow or tawny skin, lean, spare, poorly nourished, will not eliminate the remedies readily, and, if not properly administered, will be retained too long in the system, causing much harm. In such cases glycerin is a much better vehicle than the time-honored syr. stillingia. With these hasty remarks I will briefly mention a very few of the many cases I have treated in the last twenty-five years:

Mrs. S. T., of Marion, Indiana, aged forty-four. Fibroid so large the abdomen more than suggested full time in pregnancy. Severe hemorrhages; bowels constipated. The lymphatic temperament favored both remedies, which were given in syr. stillingia, the iodid in five-grain doses and the mercury one sixty-fourth grain to the dose. After nine months the tumor was entirely absorbed.

Mrs. C., Bluffton, Indiana, could not tolerate the remedy as well as Mrs. T., and, during the course had an attack of pneumonia which necessitated a discontinuance of the treatment for some time, as lung complications followed; but after more than a year her tumor, which was larger than a four-quart measure, yielded and disappeared.

Mrs. A. P., Chanute, Kansas, had a tumor of large depressing proportions. In this case the mercury was omitted and bromide potassium was substituted. She was entirely relieved in eight months.

Mrs. G. M., Spencer, Indiana, required but about six months' treatment to relieve her of a large uterine tumor. Her temperament was such as to tolerate large and continuous doses of both drugs. In all these cases saline or other mild cathartic was freely given. The iodid was seldom given in doses of more than five grains, and the mercury never over one thirty-second grain.

If the drugs have the desired effect the tumor will, seemingly, be larger at the end of the first month than when treatment was begun, but diminish rapidly after that. Sometimes, however, the growth will remain unchanged for a considerable period, then diminish with great rapidity.

A lady from Barton County, Missouri, who had a large tumor, took this treatment patiently for eleven months without noticing any perceptible change in the

growth. Then it disappeared more rapidly than any I had ever heard of before, but not until I had pushed the drugs to the limit, and the lymphatic had become tender, the gums irritated, and many small pustules had appeared on the skin.

I have found the nervo-sanguine temperament the hardest to treat, and the one most likely to result in failure. The bilious lymphatic yields the most easily.

In conclusion, I would say a word as to the diet of the patient while under treatment: Salt should be used very sparingly, if at all; acids should be avoided; meat not more than once a day. Milk and cereals are the best foods during this treatment.

The patients who would sit as directed, before a window, letting the sun shine upon the back, for hours, showed better results than those who did not do so.

204 North Alabama Street.

Examination Questions and Answers Maryland Examining Board, June 20-23, 1906.

(Continued from Page 318).

SURGERY.

1. What are the general principles governing the treatment of fractures at or near joints?

ANSWER.—Examine carefully to see if a dislocation exists. Also anesthetize patient if in doubt. Carefully adjust fragments, make passive motion early, and inform the patient that he will probably have a stiff joint. Put up limb in position which will be most useful to him if it becomes stiff, *i. e.*, elbow joint. Put up forearm at nearly a right angle with arm, and midway between provation and supination.

2. What conditions require and what is the usual method of performing (a) thoracentesis, (b) resection of ribs?

ANSWER.—(a) Conditions requiring thoracentesis: (1) to remove a collection of serous fluid which is producing symptoms; (2) to diagnose the nature of the fluid. Under thoroughly aseptic conditions the aspirating needle is plunged into the pleural cavity at the fifth interspace, just in front of the angle of the scapula, the patient being in the semi-recumbent position. The intercostal artery is avoided, and care is taken to avoid injuring the lung. The fluid is drawn off preferably into a bottle by a pump, and is done rather slowly in order to avoid cough and syncope. If the patient becomes very faint the operation is abandoned. It is best to withdraw large accumulations in installments. (b) Conditions requiring resection of ribs: (1) Empyema for drainage; (2) Exploratory operations on parts covered by ribs; (3) Fracture of ribs injuring internal organs; (4) Tumors or necrosis of ribs. Usually remove portion of sixth rib in midaxillary line. Incision over middle of rib, about three inches in length. Divide periosteum in same direction, separate it from bone, being careful not to injure artery. The bone is divided with forceps or a Gigal saw, about an inch being removed. Artery is ligated at each end of the incision, periosteum is removed, and pleura opened, if indicated. The object of removing the periosteum is to prevent the too rapid reformation of bone. The incision may be enlarged, and two or more ribs resected if necessary.

3. Give the treatment of a sprain of the ankle joint.

ANSWER.—In mild sprains Tibney's method of applying adhesive plaster to the joint is best. The patient may walk at once. This prevents stiffness, and the pain soon disappears. More severe sprains require rest and elevation, and the application of cold, although heat sometimes will give greater comfort. Massage should begin on the second day. By the fifth day the acuteness of the pain has passed, and the adhesive plaster dressing may be applied. Massage should be used, and the patient allowed to get about as much as his comfort will permit.

4. (a) Give the differential diagnosis between chancre, chancroid, and herpes preputialis; (b) Give in detail the proper treatment of each.

ANSWER.—Chancre due to contagion from a chancre, a syphilitic lesion, or blood or pus from a person having syphilis. Chancroid due to contact with pus from a similar sore. Herpes preputialis due to mechanical or chemical irritation, or occasionally to a cold or fever. Incubation of chancre, ten days to six weeks. No incubation period for chancroid or herpes. Chancre usually single, chancroid and herpes usually multiple. Chancre superficial or elevated, chancroid punched out, herpes superficial. Surface of chancre smooth, shining, red; chancroid rough, uneven. Secretion of chancre scanty, serous, autoinoculable with great difficulty; secretion of chancroid abundant, purulent, readily autoinoculable; herpes, moderate secretion, autoinoculable with difficulty. In chancre, induration almost always present, in chancroid rarely present. Chancre, no pain; chancroid and herpes, very painful. Chancre usually heals spontaneously, second attack rare; chancroid often extends, no protection against second attack; herpes may spread, but usually heals promptly. The bubo of a chancre is constant, or herpes is rare, and of chancroid occurs in one-third of cases. The only positive diagnosis of chancre is in the secondary symptoms of syphilis. *Treatment*—Chancre, do not cauterize, unless it is phagadenic. Soak in warm salt water twice daily, and spray with fifty per cent hydrogen peroxide. Dust with equal parts calomel and bismuth. Constitutional treatment

only after appearance of secondary symptoms. Chancroid, clean with peroxide, cauterize as often as necessary with carbolic and nitric acid. Moist dressing of bichloride or black wash. When granulation begins, dress dry with calomel and bismuth. If phimosis exists, make dorsal incision or circumcize. Herpes preputialis, clean and dress with calomel and bismuth or boracic acid.

5. Stating your reasons, give what you consider to be the most suitable suture material for (a) anastomosis of the intestines; (b) uniting the peritoneum; (c) muscles of the abdomen; (d) closing skin.

ANSWER.—(a) Fine silk, because of its strength and slow absorption. (b) Medium-sized catgut, because it absorbs in a week or ten days. (c) Catgut, because of its absorbability. (d) Catgut, if a subcuticular stitch is taken, because of its absorbability, but silkworm gut, if through-and-through stitches are taken, because it is less liable to become infected. Of course, I would choose none of these sutures unless their sterility was assured.

6. Give the treatment of severe shock after severe injury or after a major surgical operation.

ANSWER.—Treatment of severe surgical shock: Raise feet and lower head, unless position causes cyanosis. Wrap patient in blankets, surround with hot water bottles, taking care not to burn him. Ordinary stimulants do not seem of much avail, but may be tried; either brandy, strychnia, digitalis, atropin, hypodermically. Opium is contraindicated. Hot and stimulating rectal enemata are valuable, i. e., ammonium carbonate, twenty gr. in one quart hot water, or hot coffee and whisky, two ounces. Bandage extremities to keep most of blood in brain. Apply mustard plasters over heart and spine.

PATHOLOGY.

1. Define the following terms: (a) Coccus, (b) bacillus, (c) spirillum, (d) faculative anerobe, (f) name one anerobic organism.

ANSWER.—(a) A spherical shaped bacterium. (b) A rod-shaped bacterium. (c) A spiral or cork screw shaped bacterium. (d) A bacterium that grows only in the absence of oxygen. (e) One that grows best without oxygen, but will grow in the presence of oxygen. (f) Tetanus bacillus.

2. (a) Name the pathogenic cocci. (b) Give the morphology. (c) Method of staining of each. (d) Name the varieties usually found in the following diseases: (1) Fornuculosis, (2) tonsillitis, (3) purulent salpingitis.

ANSWER.—(a) Staphylococcus pyogenes aureus, albus and citrens, staphylococcus epidermidis albus, streptococcus pyogenes, gonococcus, diplococcus intercelluloris meningitidis, micrococcus letratgenus, pneumococcus. (b) The staphylococci are in irregular masses, or clusters, like bunches of grapes; streptococci are in chains, gonococci are shaped like coffee beans, diplococci are in pairs, of which the pneumococcus and diplococcus meningitidis are types. (c) They are all stained with Loefler's methylene blue, the process of which is as follows: Make a film of the bacteria upon a clean cover slip, dry and pass three times through the flame to fix, pour on the methylene blue, wash off after a quarter of a minute, dry, mount in xylol balsam, and examine with one-twelfth oil emersion objective. (d) (1) Staphylococcus epidermidis albus. (2) Staphylococcus, streptococcus and pneumococcus. (3) Gonococcus.

3. (a) Describe in detail the process of cavity formation in a case of tuberculosis of the lungs. (b) Give the morphology of. (c) Describe in detail the method of staining of the tubercle bacillus. (d) Name two other bacilli with similar staining properties.

ANSWER.—(a) Individual tubercles from which ultimately undergo caseous mass enlarges as the tubercles do, and finally coalesces with adjoining ones forming greater masses of a cheesy necrotic substance which breaks down, sloughs out, and forms cavities. (b) The tubercle bacilli are slender, rod-shaped, sometimes beaded, either straight or curved, bacteria about one-half micron in diameter and from three to five in length. (c) Make a thin film of the suspected substance upon a cover slip with a sterile platinum loop, dry, fix by passing the cover slip three times through the flame with film side up, pour upon it Ziehl's carbol fuchsin, steam for three or four minutes (do not boil), wash off with water, decolorize with ten per cent mineral acid, wash in water, counterstain with methylene blue, wash in water, dry, mount, examine with one-half oil emersion. (d) Hay bacillus, smegma bacillus.

4. Describe the pathologic changes as regards the urinary tract one would expect to find in a case of hypertrophy of the prostate of long standing.

ANSWER.—The median and posterior lobe undergoing a hyperplastic condition with the remainder of the prostate, infringes upon and sometimes closes up the urethra preventing urination.

5. Describe microscopically the changes one would expect to find in the appendix and surrounding structures in a case of catarrhal and one of gangrenous appendicitis, respectively.

ANSWER.—In catarrhal appendicitis there is enlargement and congestion of the appendix with dilatation of blood vessels leading to the organ, frequently a mucopurulent fluid in its lumen, and no adhesions or pus. In gangrenous appendicitis, the pathological changes would depend entirely upon the progress the gangrene had made. In the early stages there would be a violently inflamed and congested condition of the appendix, and a dark spot would appear at the focus of inflammation. As the disease progressed this spot would enlarge till death of the whole appendix would take place. Violent suppuration then begins, a cellular exudate takes place in the surrounding tissues, which forms adhesions and a protective wall against the forming pus. This process progresses until

only floating debris of the gangrenous appendix is found in the pus.

6. Give a gross and microscopic description of a cross section of myomatous uterus. In what localities is this species most frequently found?

ANSWER.—This question is not correctly stated. A myoma of the uterus microscopically has a firm whitish appearance, is tough and fibrous, and looks very much like normal uterine tissue. Microscopically it has spindle-shaped cells with cigar-shaped nuclei, with less intercellular substance than a fibroma. Myomata are found principally where there is normal non-striated muscle.

CHEMISTRY.

1. Define the terms: (a) Element. (b) Compound. (c) Mixture. (d) Explain the use of the suffixes: ous and ic.

ANSWER.—(a) A substance composed of only one kind of atoms. (b) A substance composed of different kinds of atoms chemically united. (c) A physical association of different substances. (d) ous means that the element to whose name it is joined occurs in a greater proportion; ic means that the element to whose name it is attached occurs in a lesser proportion.

2. (a) State the chemical composition of atmospheric air. (b) What is the difference between expired and inspired air and explain how this is brought about?

ANSWER.—(a) Air is a mixture of oxygen, twenty-three per cent; nitrogen, seventy-seven per cent, together with small quantities of water, carbon dioxide, ammonia, argon, etc. (b) Expired air is richer in carbon dioxide and poorer in oxygen than inspired air, the difference being due to the oxidation of the tissues by the oxygen taken into the blood, thus forming carbon dioxide, which is brought away by the venous blood and discharged into the lungs, the air to be expired.

3. (a) State the properties of good drinking water. (b) What are its most dangerous impurities and why? Describe the methods in use for its purification.

ANSWER.—(a) Clearness, absence of odor, and absence of organic matter. (b) Organic matter indicates bacteria. (c) Boiling and filtration.

4. (a) Give the chemical definition of a simple ether. (b) Give the chemical constitution and the physical and chemical properties of sulphuric ether. (c) Is this term a correct one, and why?

ANSWER.—(a) Oxides of hydrocarbon radicles. (b) "Sulphuric Ether" has a formula $(C_2 H_5) O_2$. Ether is a clear, volatile, inflammable liquid, a good solvent for many resinous substances. (c) The name sulphuric ether is incorrect, because neither sulphuric acid nor its radicle SO_4 enters into the composition of ether. The correct chemical name for the official ether is ethyl oxide.

5. (a) What, chemically, are the vegetable alkaloids? (b) State their characteristics and give the effect of solvents on them and their salts.

ANSWER.—(a) Vegetable alkaloids are basic carbon compounds capable of joining with acids to form salts. (b) They are generally white, bitter, crystals, less soluble in water than are their salts.

6. (a) Suppose a specimen of urine of normal specific gravity and of ether neutral or faintly acid reaction shows, on boiling, a precipitate. What substances may this indicate? (b) How are they to be differentiated?

ANSWER.—The approach toward the alkaline reaction is due to either the elimination of fixed alkalies derived from food, or from alkalies resulting from the decomposition of urea. (b) Litmus paper turned blue by the fixed alkalies remains constant on drying, while litmus paper rendered blue by the alkalies derived from urea resumes its red color.

MATERIA MEDICA.

1. Give the composition of (a) compound cathartic pills; (b) black wash; (c) Dover's powder.

ANSWER.—(a) Compound extract of colocynth, 8 per cent; mild mercurous chloride, 6 per cent; resin of jalap, 2 per cent; gamboge, 1.5 per cent; diluted alcohol, q. s. (b) Mild chloride of mercury, 7.5 of 1 per cent; water and solution of lime, each q. s. (c) Ipecac, 10 per cent; powdered opium, 10 per cent; sugar of milk, 80 per cent.

2. (a) Give the Latin title of paregoric; (b) name all its constituents. (c) Give the amount of the principal drug in one ounce of the mixture.

ANSWER.—(a) Tinctura opii camphorata; (b) powdered opium, benzoic acid, camphor, oil of anise, glycerine, diluted alcohol. (c) 1.82 grains.

3. (a) What is the official name of calomel? (b) What drugs are incompatible with it and why?

ANSWER.—(a) Hydrargyri chloridum mite. (b) Acids, acid salts, alkaline carbonate, lime water, ammonium chloride, potassium iodide, ferrous salts, sulphur, antipyrine, antimony sulphide. Because these drugs react chemically with calomel, forming poisonous or undesirable compounds.

4. (a) Give the botanical name and (b) official preparation of digitalis, with dose of each.

ANSWER.—(a) Digitalis purpurea. (b) Extractum digitalis, one-fifth grain, fluidextractum digitalis, one minim; infusum digitalis, two fluid drachms; tinctura digitalis, fifteen minims.

5. Name the official vegetable acids.

ANSWER.—Acetic acid (in three strengths), benzoic acid, salicylic acid, camphoric acid, gallic acid, hydrocyanic acid, tannic acid, tartaric acid.

6. Give the source of (a) acetanilid, (b) caffein, (c) salol.

ANSWER.—(a) Coal tar derivative. (b) alkaloid from coffee and tea. (c) Salicylic ester of phenol.

THERAPEUTICS.

1. Give the general rule for calculating doses for children.

ANSWER.—Young's rule, which says, add twelve to the age and divide by the age to get the denominator of the desired fraction, the numerator of which is always one.

2. What are the modes of administration of medicines? How does dosage vary in each with that of the mouth?

ANSWER.—(a) By the mouth and stomach; hypodermically, by inunction, by inoculation, by inhalation, by injection into the larger blood vessels, and per rectum. (b) Hypodermic doses should be one-quarter smaller, while the rectal dose should usually be one-quarter larger than doses given by the mouth.

3. What are the physiologic effects and medicinal uses of the preparations of belladonna?

ANSWER.—Belladonna is a powerful stimulant and midriatic, contracting the superficial capillaries so as to dry the skin. It is antagonistic to opium.

4. Give the therapeutic uses of the iodides. How are they best administered?

ANSWER.—The iodides are principally used as alteratives, and are well administered dissolved in compound tincture of gentian by gradually increasing doses.

5. What are antipyretics? Describe general use of and how administered.

ANSWER.—(a) Agents used to reduce temperature in disease. (b) They are used when the temperature becomes dangerously high, and are administered in widely different ways.

6. Name the official digestive ferments. Give their physiologic action and therapeutic uses.

ANSWER.—(a) Pepsin and pancreatin. (b) Their actions and uses are to aid gastric and intestinal digestion.

PHYSIOLOGY.

1. Describe the circulation of the blood.

ANSWER.—A complete discussion of this subject would require at least ten or twelve pages, but we will mention here only the cardinal features. The blood circulates through a system of tubes known as the arteries, capillaries, veins. The arteries carry the blood from the heart to all parts of the body and deliver the blood to the capillaries, which in turn distribute it among the tissue cells, and they deliver it to the veins, which bring it back to the right auricle of the heart, from which it passes to the right ventricle, then through the pulmonary artery to the capillaries of the lungs, from which it is collected by the pulmonary veins and brought to the left auricle of the heart, passing next to the left ventricle, then again into the arteries.

2. (a) What is coagulation of the blood? (b) Give some of the theories of coagulation and state how it may be hastened or retarded. (c) What is intravascular clotting? How may it be caused and why does it not take place under ordinary circumstances?

ANSWER.—(a) Solidification or clotting. (b) The best theory perhaps is that coagulation is ultimately caused by disturbance in the lining membrane of the blood vessels, said disturbance liberating a compound which co-operates with the fibrine factors to form fibrine. An exploded theory is that clotting results from exposure to air. Clotting is hastened by agitation of blood and is retarded by moderate heat. (c) Coagulation inside the blood vessels. This may be caused by disturbance of the endothelial lining of the vessel, which lining, however, is usually intact.

3. What is meant by the heat-regulating mechanism of the body? Explain the maintenance of a constant body temperature.

ANSWER.—(a) This part of the question explains itself. A heat-regulating mechanism means a mechanism to regulate heat. (b) The maintenance of a constant bodily temperature is due to the balance existing between the heat-producing forces, such as oxidation of the tissues, the heat-reducing forces, such as the contact of the body with the atmospheric air. The circulation of the blood serves to distribute a uniform temperature throughout most parts of the body.

4. Describe the physiologic functions of the kidneys.

ANSWER.—Function of the kidney is to eliminate such waste products as urea, uric acid, inorganic salts, and water.

5. Describe the mechanism of respiration, both normal and forced.

ANSWER.—Respiration includes inspiration and expiration. Inspiratory mechanism consists in the descent of the diaphram, the elevation of the sternum principally by the scaleni, and the eversion of the ribs by the external intercostals, pectoral and other muscles. Expiration, on the contrary, is purely passive, consisting in the ascent of the diaphragm and collapse of the chest, said collapse being due to the elasticity of the tissues involved. (b) Forced respiration brings violently into play the abdominal muscles during expiration.

6. Describe the phenomena and give some theories of sleep.

ANSWER.—Sleep is a normal and temporary subsidence of all the voluntary functions of consciousness. Theories of sleep are (1) Fatigue of the vaso-motor placentas, (2) Formation of soporific substances during waking hours, etc.—*State Board Journal of America.*

Inclosed find one dollar for subscription to the BRIEF. I would not like to be without the BRIEF, with its bright and instructive articles. I am quite an old member of the BRIEF family, and do not wish to part company with it until the sands of time have run their course.—A. ALLEN NOXON, M. D., Toronto, Canada.

Book Notices.

DISEASES OF THE STOMACH AND INTESTINES. With an Account of Their Relations to Other Diseases and of the Most Recent Methods Applicable to the Diagnosis and Treatment of Them in General; Also, "The Gastro-Intestinal Clinic," in which all such diseases are separately considered. By Boardman Reed, M. D., Member of the American Medical Association, American Climatological Association, American Academy of Medicine, American Electrotherapeutical Association, etc. Illustrated. Second edition. New York: E. B. Treat & Company. Price, $5.00.

These lectures to general practitioners first appeared in 1904, and after a large edition was disposed of it was but natural that an urgent request was made for a new edition. All the important advances and improvements that were found necessary have been made, and much new material has been added to eighteen of the lectures, thus making valuable additions that will greatly enhance the value of this volume.

THE PRACTICE OF OBSTETRICS. Designed for the Use of Students and Practitioners of Medicine. By J. Clifton Edgar, Professor of Obstetrics and Clinical Midwifery in the Cornwell University Medical College; Visiting Obstetrician to the Emergency Hospital of Bellevue Hospital, New York City; Surgeon to the Manhattan Maternity and Dispensary; Consulting Obstetrician to the New York Maternity Hospital. Third edition, revised. With twelve hundred and seventy-nine illustrations, including five colored plates and thirty-eight figures printed in colors. Philadelphia: P. Blakiston's Son & Co. Price, $6.00.

The first edition of this work was printed in 1903, the second in 1904, and the third in October, 1906. It is very creditable to an author that three large editions of his best efforts in a work have had such a recognition. We believe it is one of the best works on this subject that has ever been placed on our review table. There is nothing so convincing in a work of this nature as a host of original illustrations to add to the text matter. It is so completely gotten up and the subjects are so fully elucidated and up to the latest ideas on the subjects, that we are fully convinced as to the fact that no other work can take its place. We note with pleasure that all weights and measurements are given in English with the metric equivalents in parenthesis. The whole work shows wisdom in all its parts and fully meets our approval of what such a work should be.

AMERICAN PRACTICE OF SURGERY. A Complete System of the Science and Art of Surgery, by Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M. D., and Albert H. Buck, M. D., of New York City. Complete in eight volumes, profusely illustrated. Volume II. New York: William Wood & Company. Price, extra muslin, $7.00; brown leather, $8.00; morocco, $9.00.

American practice of surgery has so far advanced in science and art that all other nations stand aghast and wonder as to the daring methods that have proven successful. American works on medicine and surgery prove to all nations that they are authoritative on the subject. When such operators as Bryant and Buck issue such a work as "American Practice of Surgery," it is authoritative and beyond dispute. It took years for these American operators to formulate this work, and they only produced it when, after deep thought, they knew they were absolutely convinced that they were right and felt the responsibility was great. Yet this is the result of long deliberation from a purely American standpoint, and no foreign writers have been invited to take any part in the work, thus making it purely American. It embraces much that has never before been published in any work on surgery.

A TREATISE ON SURGERY. By George Ryerson Fowler, M. D., of Brooklyn, New York City, Examiner in Surgery Board of Medical Examiners of the Regents of the University of the State of New York; Emeritus Professor of Surgery in the New York Polyclinic, etc. In two imperial octavo volumes of seven hundred and twenty-five pages each, with eight hundred and eighty-eight text illustrations and four colored plates, all original. Vol. II. Philadelphia and London: W. B. Saunders Co. Price, per set, cloth, $15.00; half morocco, $17.00.

In this volume we find the same excellence of text and handsome and well-executed illustrations that can only be found in this work. We highly commend the set, as exhaustive and up-to-date.

PLASTER OF PARIS AND HOW TO USE IT. By Martin W. Ware, M. D., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor in Surgery, N. Y. Post-Graduate Medical School. New York: Surgery Pub. Co. Price, cloth, $1.00.

This is one of the most useful books ever presented, not only on account of the general demand for the information and instructions upon the subject which this book so explicitly, practically and comprehensively covers, but because this knowledge was not previously available except from such a vast experience as enjoyed by Dr. Ware, or, in part, by reference to many books on allied subjects. It is a vivid narrative, profusely illustrated, of the many uses to which plaster of paris is adaptable in surgery. The whole subject, from the making of the bandage to its use as a support in every form of splint, corset or dressing, is graphically described and illustrated. The use of plaster of paris in dental surgery is also covered.

THE TECHNIC OF OPERATIONS UPON THE INTESTINES AND STOMACH. By Alfred H. Gould, M. D., of Boston. With one hundred and ninety handsome illustrations on plate paper, most of them original and some in colors. Philadelphia and London: W. B. Saunders Company. Price, cloth, $5.00; half morocco, $6.00.

In a work on technic of operations, the illustrative method of doing these operations is of great importance, and we do not know of any better way to make a work of this nature interesting and instructive, as words do not convey the idea as well as a proper and instructive view of the process by which it is done.

A TEXT-BOOK OF OBSTETRICS. By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania; Gynecologist to the Howard, the Orthopedic and the Philadelphia Hospitals, etc. Fifth edition, revised and enlarged, with seven hundred and sixty-seven illustrations, forty of them in colors. Philadelphia and London: W. B. Saunders Company. Price, cloth, $5.00; half morocco, $6.00.

We find in the preface of this edition the following: "The author has carefully revised this edition, paying particular attention to the recent advances in our information regarding puerperal infection and gestational toxemia, but incorporating in the next only the facts that seem at present clearly established. As in former editions, the author has endeavored to keep in mind the needs of the medical student and practitioner of medicine, who must be prepared to accept the responsibility involved in obstetrical practice."

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M. D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association and the British Medical Association; Fellow of the Medical Society of London, etc., etc. Sixth edition, thoroughly revised. (In conformity with latest revised U. S. Pharmacopœia, 1905.) Philadelphia: F. A. Davis Co., Publishers. Price, cloth, $5.00; sheep, $6.00.

The editions of this work are very large, and should be a great inducement to secure the sixth edition of such a popular work, as many additions have been added to this one, owing to the changes that made it obligatory to change in conformity to the late revised Pharmacopœia. All the original features have been retained, but it was found necessary to make many changes to conform to existing conditions, as throughout all these editions the student and practitioner will find his needs fully looked after.

PARAFFIN IN SURGERY. A Critical and Clinical Study. By William H. Luckett, B. S., M. D., Attending Surgeon Harlem Hospital; Surgeon Mount Sinai Hospital Dispensary. And Frank I. Horn, M. D., Assistant Surgeon Mount Sinai Hospital Dispensary, New York City. With thirty-eight illustrations. New York: Surgery Publishing Company. Price, $2.00.

The introduction of paraffin in certain troubles, where defects are to be remedied —such as depressions of the nose or face where Nature failed to correctly supply the symmetry—is a consideration that should appeal to all practitioners. How to apply this effect to rectify deformities should be thoroughly studied, and you have here a full discussion and illustrative effect, on which you can base a practical idea of the methods.

A MANUAL OF THE DISEASES OF INFANTS AND CHILDREN. By John Ruhrâh, M. D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Illustrated. Philadelphia and London: W. B. Saunders & Co. Price, flexible leather, $2.00.

The author very aptly says, in the preface: "The average medical student attending the third and fourth sessions has about fifteen different branches with which to familiarize himself. The textbooks treating of these subjects average about one thousand pages each, or a total of fifteen thousand pages. The student is busy all day at the college or in the hospital. In the evening he is expected to review the subjects he has considered during the day, as well as fill in the many gaps in the college curriculum. Small wonder is it that, as the German proverb puts it, "he can not see the wood for the trees." This book is for the medical student in these extremes, and should be thoughtfully considered.

YAHB AND CRETINE; OR, RISING FROM BONDS. By Dr. George B. H. Swayze, Philadelphia, Pa. Published by The C. M. Clark Publishing Co., Boston. Price, $1.50.

This work is an interesting story, showing a natural analysis of the race problem in the United States. It is a story that is treated by the representative characters themselves on historical lines in the imperishable interests of harmony and prosperity between the colored and white population in the United States. You will have to read this story to see whether such conditions can ever become a fact. Dr. Swayze's portrait appeared in the BRIEF in April, 1904, and an article from his versatile pen on "The Arrest of Consumption." How ably he treated this subject will show conclusively that this work is worth the time.

ANATOMICAL TERMINOLOGY, With Special Reference to the B. N. A. By Lewellys F. Barker, M. D., Professor of Medicine Johns Hopkins University, Baltimore (Formerly Professor of Anatomy Rush Medical College, University of Chicago). With vocabularies in Latin and English and illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $1.00.

The Basle Anatomical Nomenclature—popularly referred to as the B. N. A.—is the result of an earnest, concerted effort to systematize and simplify a nomenclature which has grown in haphazard manner, become burdened frequently with multiple designations for one structure, and in general has deteriorated in scientific accuracy and value. The expression (B. N. A.) is a shorthand title for a list of some four thousand five hundred anatomical names accepted at Basle in 1895. It is a good reference book.

CONSERVATIVE GYNECOLOGY AND ELECTRO-THERAPEUTICS. A Practical Treatise on the Diseases of Women and Their Treatment by Electricity. By G. Betton Massey, M. D., Attending Surgeon to the American Oncologic Hospital, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, etc., etc. Fifth carefully revised edition. Illustrated with twelve original full-page chromo-lithographic plates of drawings and paintings, fifteen full-page halftone plates of photographs made from Nature, and one hundred and fifty-seven halftone and photo-engravings in the text. Complete in one royal octavo volume of four hundred and sixty-seven pages. Philadelphia: F. A. Davis Company, Publishers. Price, $4.00.

Conservative methods in gynecology will enlist more friends than the extremists in surgery, and all womankind will be thankful for the physician's efforts along conservative lines. There are times when surgery is the only means, but the physician's efforts should be exhausted before it is resorted to. This work has taken firm hold, as evidenced by the necessity of a fifth edition.

SELF-PROPELLED VEHICLES. A Practical Treatise on the Theory, Construction, Operation, Care and Management of All Forms of Automobiles. By James E. Homans, A. M. With upwards of five hundred illustrations and diagrams, giving the essential details of construction and many important points on the successful operation of the various types of motor carriages driven by steam, gasoline and electricity. New York: Theo. Audel & Co. Price, $2.00.

The dissemination of practical knowledge regarding the mechanism and operation of these self-propelled modes of conveyance is an absolute necessity to those who possess machines, and to those who intend to purchase one. This work should be thoroughly read, so that an understanding can be had as to what is best to do.

DISEASES OF CHILDREN. A Manual for Students and Practitioners. By George M. Tuttle, M. D., Attending Physician to St. Luke's Hospital; Martha Parson's Hospital for Children; Bethesda Foundling Asylum; and Professor of Therapeutics Medical Department of Washington University, St. Louis. This is one of Lea's Series of Pocket Text-Books, edited by Bern B. Gallaudet, M. D. Second edition, revised and enlarged. Illustrated with five plates in colors and monochrome. Philadelphia and New York: Lea Brothers & Co. Price, cloth, $1.50; flexible leather, $2.00.

In treating children the practitioner's task is a hard one, owing to the fact that they can lend no aid to diagnosis save the region affected, and a physician who has not treated in the family is often at a disadvantage. A thorough knowledge of this subject is essential to all general practitioners. A reading of such a work as Tuttle's can only result in good.

A TEXT-BOOK OF DISEASES OF WOMEN. By J. Clarence Webster, B. A., M. D. (Edin.), F. R. C. P. E., F. R. S. E., Professor of Obstetrics and Gynecology in Rush Medical College, in affiliation with the University of Chicago, etc. Three hundred and seventy-two text illustrations and ten colored plates. Philadelphia and London: W. B. Saunders Company. Price, cloth, $7.00; half morocco, $8.00.

No library of a family physician is complete unless some good work on diseases of women is included. It is always best to get a good and thorough work, and thus have at hand all that can be said on the subject. Consider this as one of the best.

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M. D., Professor of Clinical Medicine, University of Pennsylvania; Physician to the Pennsylvania University and the Philadelphia Hospitals. With three hundred and ninety-nine illustrations in the text, many of them in colors, and seven full-page chromo-lithographic plates. Philadelphia and London: W. B. Saunders Co. Price, cloth, $5.00; half morocco, $6.00.

This is the fifth, and thoroughly revised, edition of this work, and certainly is a leader in its line, owing to the reconstruction made in the sections dealing with general pathology and the chapters on inflammation, immunity and animal parasites. All in all, the volume has been largely increased in size and worth, and bids fair to acknowledgments as one of the best on pathology.

ATLAS AND EPITOME OF DISEASES OF THE SKIN. By Dr. Franz Mraček, Professor of Dermatology in the University of Vienna. Authorized Translation from the German. Second edition, revised and enlarged and reset. Edited by Henry W. Stelwagon, M. D., Ph. D., Professor of Dermatology Jefferson Medical College, Philadelphia; Physician to the Department of Skin Diseases Howard Hospital; Dermatologist to the Philadelphia Hospital, etc. With seventy-seven colored plates by the artists, J. Fink and A. Schmitson, and fifty half-tone illustrations. Philadelphia and London: W. B. Saunders & Co. Price, cloth, $4.00.

This is one of the series of Saunders' Medical Hand-Atlases, and is a fine specimen of this series, as about thirty new and original plates appear that are not in the first edition. These illustrations lend great aid in diagnosing diseases—especially of the skin. You can not fail to be interested in such a work.

PULMONARY TUBERCULOSIS. Its Modern and Specialized Treatment. With a brief account of the method of study and treatment at the Henry Phipps Institute of Philadelphia. By Albert Philip Francine, A. M. (Harv.), M. D. (U. of P.), of the Staff of Henry Phipps Institute, Philadelphia; Examining Physician to the White Haven Sanatorium, etc. Illustrated. Philadelphia and London: J. B. Lippincott Co.

The treatment of consumption has agitated the minds of the brightest lights in the profession, and any information that tends to lend aid in its treatment should be sought out and thoroughly digested. Will we ever arrive at an absolute cure for this dread disease?

THE HARVEY LECTURES. Delivered Under the Auspices of The Harvey Society of New York—1905-6. By Prof. Hans Meyer, Prof. Carl von Noorden, Prof. Fredrick G. Novy, Dr. P. A. Levene, Prof. W. H. Park, Prof. Lewellys F. Barker, Prof. Frederic S. Lee, Prof. Lafayette B. Mendel, Prof. T. H. Morgan, Prof. Charles S. Minot, Prof. J. Clarence Webster, Prof. Theobald Smith, Prof. W. H. Howell. Philadelphia and London: J. B. Lippincott Co.

This society was organized during the spring of 1905 through the efforts of Prof. Graham Lusk, and its object is the diffusion of the medical sciences by means of public lectures. This work is a grand illustration of what can be accomplished through such efforts.

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Editorial.

Complaints.

We have recently received a number of complaints from correspondents stating that they have failed to obtain satisfactory results from the formulas intended to take the place of well-known ethpharmal preparations. What do these doctors expect? It stands to reason that the manufacturer of a proprietary preparation takes greater pains with his product than the druggist who puts up a prescription designed to act as a substitute. The formulas sent out with pharmacopeia names, and which are expected to be included in the National Formulary, are entirely guess work, and no analysis can accurately determine the process of manufacture of an organic preparation.

We know of one proprietary remedy that owes its value to the fact that it is made from the fresh green plant. In the commercial markets the drug in question can only be bought in the form of the dried root, and a tincture made from the latter is absolutely void of the therapeutic properties of the original ethpharmal preparation. Hence the National Formulary is of no practical value to the physician; what he wants is results.

Is the Doctor a Poor Manager?

This is a question that comes up time and again, but we do not believe it can be proven, because the average physician throughout the length and breadth of the country, especially our patrons, seems to have a bank account, and his check is invariably good. Then why the saying that he is a poor manager. He knows the financial status of his trade, and acts accordingly.

The doctor treats all alike—the poor and the rich—and he should not aim to make his wealthy patients pay his poor debts because they can afford to do so. His wealthy patients demand more, and generally pay accordingly, if they are grateful for the service—the poor pay when they can, if they are grateful. Thus it is the faithful doctor who administers alike to the rich and the poor.

[Written for the MEDICAL BRIEF.]

Focal Symptoms Without Stroke.

BY HAMILTON BERNARD LOWRY, A. M., M. D., PH. D.,

Professor of Mental and Nervous Diseases in the Nebraska College of Medicine.
Lincoln, Neb.

Whether it is fact or fancy, we often hear it asserted that when a practitioner happens to have an unusual case he may look for one or more of the same kind to follow in close succession. This is claimed even when the practice may not be extensive.

But a few weeks ago, February 27, 1907, Mr. C., a brakeman on a freight train, aged thirty-four, vigorous, and with good family history, while on duty, as he approached the city, noticed that when he dropped his pocket-knife from his right hand he was unable to pick it up—was unable to grasp it, and soon was unable to move the arm. He next observed that his right foot became "clumsy," and, finally, he was unable to move the foot or leg. All this occurred, he thinks, within twenty or thirty minutes, probably the time was much shorter. The entire right side became disabled. Yet he at no time lost consciousness. On arriving in the city he was removed from the car and taken to his home. An hour afterwards he was able to give a detailed and rational account of his ailment to his family doctor, with whom I saw him the next day. He was then distinctly hemiplegic. The trouble involving the lower right side of his face, as well as the right arm and leg. "My tongue is thick, but I think I can make you understand," he said, and proceeded to give me an admirable account of his seizure. He is quite sure that he at no time lost consciousness, but watched himself, without emotion or alarm, become paralyzed on the right side.

To-day, April 1, he showed no improvement, except in his speech, which is less inarticulate than it was when I first saw him. There is no heart lesion and no atheroma, so, apparently, his trouble is due to hemorrhage. This is an ideal clinical picture of "Focal Symptoms with Stroke."

Case 2.—Last night I was called by Dr. S. to see Mrs. H., aged fifty, rather stout, but strong and active, being a professional nurse. A few hours previous to my visit she had sustained a second cerebral hemorrhage, and showed a typical and profound case of apoplexy—"focal symptoms with stroke." But four days prior to this she had complained to her family of *pain*, and a strange feeling in the right side of her head and face. Upon looking in a mirror she noticed that her face was flabby, and her mouth was drawn to the left side. Immediately there were "pins and needles" in her right arm, and her right leg followed by numbness and *loss* of power. Her tongue grew "thick," but of this she made a joke, saying "there *is* nothing to be alarmed at, for nothing can stop a woman's tongue." She never lost the power of speech and never became unconscious. This condition of things lasted for four days, that is, "focal symptoms without stroke" continued until the second attack, when stroke was added *to* the other symptoms.

The psychological aspect of both of these cases is interesting. Each saw voluntary motion go out of the right side of the body. Each actually watched half of his own person become paralyzed, but, strange to say, there was no emotion, no mental worry, no apprehension, and yet the nurse in her normal condition undoubtedly would have known the significance of such symptoms.

115 North Eleventh Street.

Correction.

In my "Practical Notes," in the May issue, the printer has made some errors which I beg you to correct: The prescription on page 378 had been written by me purposely, without abbreviation, ℞. Lithii iodati (not Iodati) 1.50. Pulveris (not pulv), quantum satis ut fiant pillulæ I did not write M. Et fiant; this would not be right; besides Et, with a capital E, looks like Bridget's letter, "I love you." On page 379 the printer has reversed completely what I wished to convey, for he gives "we have not to write fiat pillula." In fact, this is exactly what we have to write: fiat pillula and fiant pillulæ.

A. ROSE.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
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[Written for the MEDICAL BRIEF.]

The Evolution of Insanity.

BY ROBERT JONES, M. D., M. R. C. P., F. R. C. S.,

Resident Physician and Superintendent of the London County Asylum, Claybury; President of the Medico-Psychological Association of Great Britain and Ireland.
London, England.

NO. I.

The earliest times of which we have any knowledge of insanity long preceded the Christian era, and it is fairly certain that mental affections were recognized and treated by the Egyptian priesthood at least 2000 B. C., but happily they were treated as individuals suffering from disease, the mental remedial agents being not only music and the beautiful in nature and art, but bodily recreation and occupation as well.

In biblical history we have the record of well-marked dangerous, if not homicidal insanity, in the conduct of King Saul being treated with persuasive tact and music; then we have King David feigning madness in Gath (1 Sam., xxi, 13-14), for he "scrabbled on the doors of the gate, and let his spittle fall down upon his beard," but he was treated on account of his supposed affliction with fraternal care by the Philistines, who were his avowed enemies. We have also Nebuchadnezzar suffering from definite insanity, and we are compelled to believe that the treatment was humane, for, after seven years of madness he recovered, and was replaced upon the throne of Babylon.

The period succeeding the Hebrew history finds civilization, with its penalties, also advancing westward. The priests, as a special caste with special privileges, by now had lost much of their influence, which implied that a still more humane and intelligent treatment had commenced.

The "humoral pathology" of Hippocrates, which connected mental states with altered conditions of the blood, lymph and bile—thus anticipating the sanguineous, lymphatic, bilious, choleric and other temperamental states of later times—suggested treatment by bleeding, counter-irritants, purging, emetics and baths; and it is of peculiar interest at the present moment, when we ourselves are suggesting a fresh nomenclature, to note that during the time of Hippocrates, Galen and Aristotle, the period of Greek pre-eminence, an attempt was first made at a classification of the insanities. Corresponding in time to a later period of Greek influence, the gospel narrative of the author of the Christian religion affords us lessons of the most extensive humanity in the treatment of mental affliction, and the example and teaching therein recorded are possibly responsible for an account, which may be authentic, of the treatment of mental disorders in Jerusalem about the fifth century. With the decline of Greek influence, about the third century of the Christian era, anoth-

er reaction seems to have set in. Ignorance and superstition again prevailed, and not until the rise of the Bologna school in the seventeenth and eighteenth centuries, with experiments upon animals, was further progress made.

Knowledge of nature has always coincided with the decay of superstition; and with this decay incantations, spells, sorcery and witchcraft also die, for they are only pretended powers claiming to vary natural phenomena. In superstitious times the conscience of man looked upon the world as governed by some good or evil agency, sometimes both; and through the tendency to regard unknown or imperfectly known causes and effects from an anthropomorphic standpoint, cosmic phenomena tended to be personified. This simple appreciation, viz.: The possession of man by a spirit—in the case of epilepsy it was both good and bad (*morbus sacer seu demoniacus*)—afforded the indication for treatment. The evil spirit either had to be propitiated to avoid harm, or it had to be expelled with some magic charm or by means of a mystic ceremony, which latter implied an active religious rite by the priest, accompanied by sacrifices and occult incantations, and a more or less heroic ordeal for the patient, accompanied by oblations, purifications, and frequently by tortures.

The whole of the Middle Ages witnessed the association of demoniacal possession, of exorcism, and of witchcraft, and only with the laws passed against witchcraft in 1736 were these abated. This was a period of epidemics of plague, famine and pestilence, and during this period over one hundred thousand persons are stated to have been put to death for witchcraft and sorcery, of whom about one-third were lunatics.

The notion that insanity was caused by demoniacal possession was long retained, and the help of the church was naturally invoked to exercise the evil spirits. Incantations, mystical rites, the use of salt —the emblem of immortality—holy water, and the offering up of masses, all figured in the early cure of mental diseases, as they still do in the East, and as the recent report of the medical superintendent of the new Syrian Asylum in Beyrout testifies.

It is interesting to note that the first custodial institution for the care of the insane was founded in Florence in 1389; then shortly afterwards, in 1403, one was established in England by the use of "Bethlem," subsequently in 1660 the Hôtel Dieu, in Paris, was opened, and in 1737 an institution was established in Pennsylvania.

The revival of general knowledge of science, art and of literature, gave encouragement to the so-called "somatic" school. Insanity was now regarded as a condition of physical origin, and the decline in cures by faith, hope and forgiveness at once became apparent. To this school we are indebted for the spirit of research which characterizes our own day.

It is interesting to investigate the earliest reliable accounts of the care of the insane. They come to us from the Saxon times, and reveal a curious medical treatment—a compound of pharmacy or polypharmacy with superstition and castigation. The most grotesque and often the most offensive substances entered into the remedial list, and their administration was not infrequently accompanied by severe rites or ceremonies to be observed by the patient. Of the plants in use—and the herbal treatment of Dioscorides and Apuleius was repeated in later days—the peony was considered a special remedy for the cure of insanity. The mugwort, a composite plant, was especially favored for the cure of a mental illness arising through a demon. The periwinkle was also prescribed for demoniacal possession, but to be effective it was to be picked when the moon was nine nights old. The dandelion—called in Wales the "devil's eye"—was definitely associated as a cure for this "devil's sickness." Some of the Ranunculaceæ, noted for their acridity, were especially popular, and the mandrake took a high place as a cure for witlessness. Henbane was then used as a reliable remedy, but with instructions emphasized that the essence should be drunk out of a church bell, and simultaneously with the singing of seven masses by the monks. Burton, in his Anatomy of Melancholy, written in 1621, suggests that herbs should be used for the cure of madness; particularly should borage be used for the heart, poppies for the head, and

wormwood for the stomach. Plants were often placed under the pillow and slept upon, and the practice of outward application by salves was also in vogue, but as a necessary condition in the use of outward application. Masses were compulsory. Holy water had to be used, the sign of the cross had to be made, and incense burnt. The early physicians very thoughtfully, if not somewhat astutely, allowed some considerable time to elapse between the patient's first and second visit, as their prescriptions were not always easy of execution, and in the meantime the *vis medicatrix naturæ* had time to effect a cure which was ascribed to the remedy. The treatment of insanity at holy wells is another method accredited to romantic superstition. The wells of St. Winifred in Wales, of St. Maree in Ross-shire, Great Nun's Pool, St. Fillans in Perthshire and St. Ronan's near Butt of Lewis, are well known as resorts for mental invalids, and who can say that this treatment was not the anticipation of the "long immersion" of today?

Hack Tuke states that the first literary reference to insane persons in Great Britain is made by Gerald, the Welshman, who states that medicine could only be obtained in the monasteries, as the monks were the only practitioners; also that those persons were lunatics whose attacks were exacerbated when the moon every month was at the full. The "Vision Concerning Pier's Plowman," written by William Langlande in the fourteenth century, calls lunatics "God's minstrels," but from that time until the eighteenth century the history of the treatment of the insane is one of harshness and cruelty, alternating with torture, persecution, superstition and ignorance.

The two centuries following the death of Shakspeare who makes frequent reference to insanity, witnessed the treatment of the insane by flagellation, torture, confinement in dark rooms, and acute suffering, often until death relieved them. It was a treatment of the greatest cruelty, inhumanity and barbarity. The insane were tied to crosses, to pillars in churches; flogged at "trees of truth," or burnt as sorcerers at the stake.

The milder forms of mental disorder were treated by pilgrimages to the shrines of certain saints who were reputed to have particular skill and success in the exorcism of evil spirits, and if they were not cared for at the shrines they wandered homeless about the country. Lunatics from all over Europe were brought to the shrine of St. Dymphna, in Belgium, for miraculous healing. Those who were a menace to the community were either chained in dungeons or sent to the common prisons, and this as late as the beginning of the nineteenth century.

Up to the fifteenth century the weak-minded and the insane were associated with criminals and other dependent persons (those whom we now term paupers), who, at that time, were under one authority. Gradually, however, owing to the accumulation of lunatics in prisons a distinction was drawn between these and criminals, and the two classes were separated; the insane being taken to cloisters and monasteries, as is exemplified today in the use by the mentally afflicted of the priory for the brethren and sisters of the Order of the Star of Bethlehem. The engravings of the great pictorial satirist, Hogarth, and the records of Evelyn, show to what barbarity and cruelty the insane were subjected—fastened in chains, strapped in covered cribs, confined in wristlets and strait-jackets, even as late as the year 1841. This wretched torture, the neglect and the horrible injustice shown to the insane, are vividly described in the *Gentleman's Magazine* for July, 1804, in a letter to Dr. J. C. Lettsom, part of which is as follows: "I was shown downstairs into a room (Launceston Workhouse) in a very dirty state, in which a poor lunatic was confined. He lay stretched on a little short and dirty straw, with a few rags on him. His fixed, intent eyes; his shaggy hair, long beard, dirty and livid face, gave him the appearance of a monster. The floor of the room was earth, and literally a puddle of water and dirt more than an inch deep. The keeper had unmercifully beaten the poor fellow, and given him two black eyes."

The harsh measures of the eighteenth and early nineteenth centuries included also crude, severe and unsympathetic medical treatment, *e. g.*, blood-letting in the standing, recumbent, or sitting posture; active counter-irritants, drastic purga-

tives, the shower-bath, emetics and heroic doses of tartarized antimony, of mercury and of digitalis. These have now given way to hygienic measures, exercise and suitable medicinal and moral treatment, of which congenial occupation and amusement form especial features.

Although the nineteenth century has been described as the "most conceited since God made man," it is entitled to be recorded as the most illumined period in regard to the rational, humane and scientific care of the insane. It is only during this period that the metamorphosis—if it may be termed—of asylums has taken place, and if we correctly appreciate the spirit of the times there is a growing tendency to further metamorphosis, *i. e.*, to a greater sub-division and specialization for the great class of defective and morally infirm section of the population. As a contrast to the jails, shrines, holy wells, chains, tortures and exorcism, we have today suggestions for the care and cure of early cases of insanity by "reception houses," and we already have well-planned and furnished hospitals for the acutely insane, others for the chronic insane; asylums for the criminally insane, institutions for the inebriate or chronic drunkard and for the feeble-minded, and finally we have colonies for the epileptic. Probably in the immediate future we shall have penal or educational settlements for the idle or "work-shy," and suitable colonies for the care of the profligate, the vagrant, the prodigal and the facile.

As one of the most brilliant examples of lunacy reform, there exists in London today an institution which has survived the vicissitudes of criticism. From being the "Bedlam" of reproach, the Bethlem Royal Hospital has now become the most enlightened hospital in the world for the treatment of mental diseases.

We owe to Pinel, whose work was translated into English by Davis, of Sheffield, a philosopher, scholar and physician, and to his successor, Esquirol (the Hippocrates of psychological medicine, as he is called), to Griesinger, to Guislain, and to many others, the deepest obligations for more exact knowledge and information in regard to the treatment of the insane, and for the abandonment of cruelty, barbarity and inhumanity. Sainthood is not the exclusive property of the church, and those of us who practice in the department of psychological medicine have also our calendar. The names of Conolly, Tuke, Gardiner, Hill and Charlesworth are pre-eminently those of apostles and saints in regard to the more humane treatment now universal in asylums for the insane.

The history of this improvement has coincided in the main with the history of special legislation, a statement which emphasizes the necessity for further legal changes, as we in England are not at present permitted by law to treat insanity, even in the earliest stages, as other bodily diseases are treated, viz., in special homes under the care of special trained and skilled nurses, obviating the necessity of placing them under certificate of insanity, a course at present compulsory. Previous to 1828 there were but few legal enactments dealing with the care of the insane, those existing at this time dating back only to the second or third year of the reign of William IV, although the Lunacy Commissioners inform us that statistics may be traced as far back as the reign of Edward II. Prior to 1828 the Royal College of Physicians, represented by five of its fellows, had the supervision and licensing of asylums in London and Westminster within a radius of seven miles, whilst the county justices of Middlesex and other counties acted for the provinces, a supervision which was not to the advantage of the insane. In the year referred to the number was augmented to fifteen Fellows of the College, and in 1832 this body was styled the Metropolitan Commissioners in Lunacy. In 1845 the board of eleven Commissioners in Lunacy—now only eight—was appointed; of the latter two are honorary and six are paid, and it is since this systematic visitation of all institutions for the insane, and since the control of nearly all lunacy procedure has fallen into the hands of these Government officials, that the care of the insane has become the proudest boast as to progress in the nineteenth century. So complete is the authority the Lunacy Commissioners exercise over the certified insane that there are few circumstances in connection with persons of unsound mind which do not fall under their immediate control.

It is impossible to estimate correctly the number of insane persons at the beginning of the nineteenth century, as not until January 1, 1859, was the number of lunatics officially registered. At that date there were 36,762 insane persons, a proportion of one to every 536 of the population. The number of registered insane persons in England and Wales when the Lunacy Commissioners were first appointed was 11,272, there being then only fifteen county asylums. Now there are 121,979, and a total of 176 hospitals, licensed houses and asylums.

This record would not be complete without allusion to the more recent legislation for the idiot and imbecile. Up to 1847 no separate provision existed for this class, but Dr. Andrew Reed, a philanthropic divine, began to interest himself in this class, and subsequently founded the Earlswood Asylum, from which, as a pioneer, sprang several other most deserving and useful charities.

In 1886 an act was passed permitting backward children to be placed in such institutions upon one medical certificate merely stating that such a course would benefit the child, so that it is now no longer necessary to certify these backward children as "lunatics." We have further, for children less afflicted, the "Epileptics and Defective Children's Act" of 1899, making it permissible for public authorities to provide suitable educational facilities for this class.

Many of the vagrants, "ne'er do weels," profligates and immoral persons; criminals and lunatics, are recruited from these classes; and in my own experience cases are received into asylums from prisons who, in infancy, have attended hospitals and charities as mentally and physically defective. If the stock is to be kept free from taint a proper supervision should be kept over this class. In country districts they are more definitely known, and a certain amount of "communal vigilance" is exercised over them, but in towns this is obviously impossible, and it should become the duty of the State so to register them by special notification through the schools as to direct and control their lives, and to see that adequate care is exercised over their destinies in specially adapted schools, homes, colonies or settlements. Such a regard would tend to lessen the necessity for increased asylum accommodation.

What have been the contributory factors to the changes in the treatment of the insane, and what do they signify? The answer to the former question is found in the undisputed fact that mental diseases form an integral part of disorders of the nervous system, and are not a fragment detached, as it were, from the domain of general medicine. Possibly also the mental infirmity of King George III gave an impetus to the more enlightened treatment of mental diseases, which even long after this period continued to be a reproach.

The fact that all institutions for the care of the insane are carefully inspected by Government officials of recognized professional ability and rank in law and medicine, whose reports are made public, has had a great effect upon the care of the insane, also the fact that they are, for the most part, supervised by unsalaried boards of trustees representing charities or managers and visitors elected by the people; and I think we may legitimately claim the further fact that institutions for the insane are served by responsible medical authorities, who link their reputations with those of the institutions they serve, and to which they devote their time with loyal energy and fervor.

There is in consequence of the above reasons more confidence on the part of the public, which induces them to send into these institutions all mentally infirm persons from whatever cause; more especially do we now find old people admitted who are suffering from the decay of nature, and whose friends no longer have the necessary time, the accommodation, nor the means to supervise them; cases which, in the circumstances of the past, would have been retained by their relations in their own homes. Upon this point going back to 1859, we find that fifty-six per cent of all pauper lunatics were in asylums, the rest being in the work-houses or with their friends. In 1905 over seventy-eight per cent were in asylums, showing among other causes, that probably the capitation grant of 1874 may have had the effect of sending into asylums a large number of chronic and

incurable patients formerly detained in work-houses and kindred institutions. Most of these cases, in spite of their transference in a state of senility and infirmity, owing to their improved sanitary surroundings, live longer, and, therefore, tend to accumulate in our asylums. Added to these senile cases there is an increasing number of young people who, being mentally defective (and this defect is now recognized by law), are, whilst children, looked after and cared for at home and in special schools, but as adolescence approaches and they begin to give trouble, they are brought into our asylums. Most of these cases, owing to the very nature of their affliction, are incurable from the start, and they help to form the chronic remainder of hopeless cases. This burden of the incurable insane is growing fast and fresh, so that accommodation is constantly being called for.

This defective community—defective in intelligence, defective in citizenship, and in productiveness to the common weal—has become a burden which must needs cause apprehension, and can not but keep awake public interest in the great question of social pathology. To some extent the press, which is occasionally a "potent and practical philanthropist," has been the proximate cause of official investigations into the data of this great subject. An article in the *Contemporary Review* of April, 1903, was the origin of the Inter-Departmental Committee on Physical Deterioration, some of whose recommendations are at present under consideration, and there have also been other committees or commissions, one on the vagrancy question, one on the feeding of children, another on the feeble-minded, and yet a fourth into the working of the poor law.

As Sir James Crichton-Browne eloquently remarks: "Unfortunately lunacy is a bye-path in public affairs hidden from the busy thoroughfare, a bye-path so somber and melancholy that most men are anxious to avoid it. Even when our men of light and leading realize in their own family circles, as they sometimes do, what madness means, they are averse to touch in public upon any question associated with their own grievous private calamity, to which a sense of reproach in some degree attaches."

[Written for the MEDICAL BRIEF.]

Brass-Workers' Disease.

BY S. HERBERT PERRY, M. D. (LOND.), M. B., B. CH. (BIRM.),

Late Assistant Physician to the General Hospital, Birmingham, and Physician for Out-Patients to the Children's Hospital. Birmingham, England.

Brass-working constitutes a large and important section of the industries of Birmingham, and for that reason there is little need to apologize for bringing the subject forward. Moreover, much of the most important medical work on the subject has been performed by physicians of this city.

It will be well to review briefly the processes of brass-founding. The first process consists of the melting down of copper and spelter (*i. e.*, crude zinc), together with, possibly, varying quantities of lead, tin and brass dust. It should be remembered that small amounts of arsenic or antimony are commen impurities of commercial zinc. During this process the zinc deflagrates, and a white cloud of zinc-oxide is given off. It is this process, together with the pouring of the molten metal into the moulds, which causes the so-called brass-founders ague. During the pouring of the metal, the deflagration continues, and the fumes are distinctly irritating. Following on are the processes of dipping, filing, polishing, etc. In my experience the polishers are very apt to suffer from anemia and gastro-intestinal trouble, such as gastritis, nausea, a metallic taste, and constipation or diarrhea. For the dipping, a strong solution of aqua fortis, often containing arsenious acid, is used. The fumes from this solution are irritating, and the dippers have a tendency to subacute and chronic bronchitis. The processes of turning, filing and finishing have their special dangers, owing to the constant presence of brass dust in the atmosphere of the shops. Lacquering and bronzing have also dangers of their own. In bronzing a powder commonly used is a copper precipitate with which arsenic may be mixed, and in making black and green bronze the articles are immersed in acid with sal-ammoniac, or with arsenic and sulphur.

I wish to draw attention to the frequent use of arsenic in these processes. I have not attempted any elaborate technical details, but have endeavored to show the dangers in which the workers are involved, and to point out that zinc and copper are not the only metals to which the workers are exposed. It will be obvious that much of the danger to health could be prevented or lessened by efficient ventilation of the workshops. This is carried out by the large firms, but I find that the majority of my hospital patients, who have symptoms of brass-poisoning, come from small firms where the ventilation leaves much to be desired.

Among the symptoms of chronic brass-poisoning there are none that are actually pathognomonic; and on these grounds I have heard the view expressed that a large proportion of these diseased workers do not suffer from copper-poisoning at all, their condition being merely due to the coincidence of certain symptoms with the saturation of their body tissues with copper compounds. That this saturation occurs there is no manner of doubt, in view of the tooth discoloration usually seen, and the occasional greenish hair and sweat of the older workers. The fact that the older workers are less affected than the younger is no proof of the harmlessness of the metal. There is good evidence to the effect that arsenic can be, with long practice, taken in considerable quantity; possibly it is so with copper. My experience is that it is usually the young workpeople who are most easily affected by brass-poisoning, and that the girls employed in the polishing and press shops suffer most of all. It is impossible to definitely say to what extent these younger women are affected, owing to the fact that anemia, which appears to be a prominent early sign of copper-poisoning, is so common an ailment of young female workers.

It is certainly common to find the older workmen with a deep green tooth-line, and possibly hair of a greenish tint, yet having no symptoms of any definite ill-health. I say definite ill-health because comparatively few of the factory hands of this city present a really healthy aspect, and we must always guard against the assumption that anemia, gastritis and constipation are due to copper-poisoning, because the patient has a green tooth-line. One of the largest brass-founders of this city expressed to me the opinion that the symptoms of brass-poisoning, acute and chronic, were more likely to appear in alcoholic subjects than in temperate men. This may be so as regards the acute attack, but the marked occurrence of chronic symptoms in young girls seems to negative this alcoholic theory. This manufacturer also stated that in an epidemic of lead-poisoning which affected his works some years ago, the alcoholic subjects were chiefly and most severely affected. This statement is of interest in view of the recent evidence to the effect that small amounts of arsenic are unusually poisonous when absorbed by alcoholic subjects. I have noted cases of lead-poisoning among brass-workers (as lead is used in making some forms of brass), but have not noted any relationship to alcoholism.

With regard to the frequency of anemia among brass-polishers, it seems reasonable to suppose that copper compounds act as toxins in the human system, and that the young workers are more susceptible than the older ones; just as childhood is susceptible to a variety of special conditions owing to the want of immunity, and just as the toxemia of the constipation of young women is apt to be associated with an anemia which does not occur among older women, in spite of the prevalence of constipation amongst them. That is to say, speaking generally, the younger organism is more likely to be affected by a toxemia than the older one. There is logical evidence to the effect that copper causes certain chronic poisoning symptoms.

The following are the chief groups of the diseases common to brass- workers:

(1). Anemia, with chronic or subacute gastritis and constipation or diarrhea.

(2). Bronchial affections; subacute tracheitis and bronchitis running on to chronic bronchitis and emphysema or phthisis.

(3). Pulmonary tuberculosis.

(4). Certain nervous diseases.

(5). Chronic renal diseases.

Practically there are two main groups:

(1). The anemic and gastric group.

(2). The pulmonary group.

There are certain neuropathic symptoms of chronic brass-poisoning, but I have no experience of the production of cerebral or spinal-cord degeneration by brass absorption. With reference to chronic nephritis it will be remembered that in brass-founding, lead may be used in sufficient quantity to give rise to plumbism. In speaking of chronic nephritis, I refer to a condition in which both definite albuminuria and casts exist; no doubtful cases are included. So with regard to pulmonary tuberculosis, all doubtful cases are eliminated.

The earliest sign of brass absorption is a green or yellow line upon the bases of the teeth. This line is upon the teeth, not deposited in the tissues of the gums, as is the lead sulphide deposit of plumbism. This green tooth line Professor L. Lewin describes as follows: Almost all who come into contact with pure copper, brass and bronze dust show on the border between the gums and the teeth a dirty green discoloration on the latter, most pronounced on the incisors and canines, and only to a small extent observable on the molars. Almost always the greenish color is situated upon a layer of tartar. It consists of basic carbonate of copper. In those who absorb much copper-dust there is often to be seen a bluish black coating, which sometimes covers the whole tooth, and can, with difficulty, be removed by pumice stone. This, Professor Lewin regards as a sulphide of copper. With regard to the green hair of copper-workers he states that after very prolonged boiling with dilute acetic acid in two out of six specimens, a faint copper reaction was obtained with ferro-cyanide of potassium, and that it is not possible to state definitely whether the color is caused by superficial deposition on the hair, or whether it is in the interior of the hair itself. Professor Lewin states that the frequency of this green hair is not great; in my experience it is fairly common, but only among the older workers. At a stage earlier than that of the green tooth discoloration, a yellowish line may usually be noticed; this consists of minute particles of brass or copper dust. The stages of tooth discoloration are, therefore, presumably brass dust, basic carbonate of copper, and finally sulphide of copper. The origin of this pigmentation is doubtless the brass or copper dust inhaled, this inhalation accounting for the fact that the pigmentation is usually limited to the incisor and canine teeth.

The Anemic and Gastric Group of Cases.—With regard to this group one has always to bear in mind that there are no actually definite symptoms by which an anemic condition can be assigned to brass or copper. However, if a young woman presents herself with a definite history of the onset of anemia and dyspepsia within six months or a year of commencing brass-work, and if the teeth show the typical coloring, it is reasonable to regard the case as one of the chronic brass-poisoning, provided that there is evidence that the anemic condition did not exist prior to the undertaking of brass-work. My analysis shows that such cases occur with considerable frequency among young females and to a less extent among young males.

These cases of anemia are apt to run on into pulmonary tuberculosis; the debility lowers the resistance to tubercle.

A variety of nervous conditions have been noted in brass-workers, but probably few of these have any definite relation to the metals employed. Different authors have described:

(1). Various forms of tremor.
(2). Paralysis agitans.
(3). Locomotor ataxia.
(4). Peripheral neuritis.
(5). Progressive muscular atrophy.
(6). A certain form of paraplegia.

I have seen two definite cases of tremor of the hands, lips and tongue occurring in women. Both patients showed a marked green tooth-line, and in both cases the condition was apparently caused by the use of a brass blow-pipe. Furnishing the blow-pipe with a mouth-piece of tin brought about a cure in both cases. The tremor was fine in quality, not unlike that of general paralysis, and in addition the reflexes were generally increased; there were no other signs of neuritis or cord degeneration. The patients' ages were thirty-two and thirty-eight.

The other nervous conditions were chorea, locomotor ataxia, melancholia and hiccough of a week's duration. I have no reason to believe that these conditions

had any etiological relation to brass-working, except that the hiccough might be set up by a gastric condition. There was, however, no obtainable syphilitic history in the case of locomotor ataxia. More recently I have seen a case of primary double optic atrophy occurring without known cause in a male brass-worker aged forty-five years.

Tremor has been noted in chronic brass-poisoning, but though paralysis agitans has been stated to be not infrequent, I have not seen a definite case of this disease. After tremor it would seem that peripheral neuritis is most likely to occur. In this connection it should be remembered that zinc spelter contains an appreciable amount of arsenic.

There is reasonable evidence to the effect that copper may give rise to signs of a chronic poisoning more especially in young adults. The fact that gold-workers also suffer is valuable confirmatory evidence. That copper miners develop a tolerance of the metal agrees with my analysis of cases; those brass-workers affected being largely the younger workers, and chiefly females. The older men, in my cases, suffered chiefly from pulmonary or renal disease.

Professor Lewin's opinion, however, is strongly opposed to a toxic copper theory. He considers that of the numerous copper and brass-workers whom he has seen, questioned and examined, and who had absolutely no reasons for concealing any illnesses which might be the result of their work, there was not one who had suffered from chronic copper-poisoning; not one who showed symptoms of ill-health, either of a temporary or permanent character, which could make him regard the person as diseased. He finally concludes that if a copper-worker shows injury to health it is scientifically more correct to attribute it to other injurious metals used, to the hardness of much of the work, to its long duration or to bad sanitary conditions, than to the copper itself.

We may now briefly consider the acute form of brass-poisoning and its causation. This—the so-called ague—attacks the mixers and moulders, not the dippers, finishers and polishers. The evidence of the workmen is definite as to the fact that these attacks occur only among those exposed to the fumes of the molten metal of which spelter (crude zinc) forms a part. Dr. Arlidge states that "similar symptoms (ague), occur among brass-workers where no zinc vapor is thrown off," but my experiences do not bear this out. The workmen have assured me that if they are copper-smelting only, they are not exposed to the acute attack. There is evidence also that such attacks do not occur among the copper smelters of the mining districts. One of the striking symptoms of chronic brass-poisoning in young adults is the occurrence of profuse sweats.

The attack of so-called ague has been variously described. The description given by Dr. Simon is exact, and with it my investigations agree. The statement that only young or fresh workers are attacked is not quite correct. It is not easy to establish tolerance; only recently a workman (a moulder), informed me that though in the trade for many years, he was always definitely attacked after a few days' holiday, and that even the Sunday holiday often caused him some malaise on Monday evening. The attack, almost always comes on at the close of the week in the evening. During the inhalation of the fumes, there is apt to be a sense of burning and heat about the pharynx, esophagus and stomach; in a young worker this may run on to vomiting about two hours afterwards, this pointing to the ingestion of some irritant poison. In the older workers this rarely occurs, the attack coming on during the evening. The attack consists of shivering (not a definite rigor), with nausea and a considerable sense of malaise. There may be some sweating, but not, I think, much more than the nausea and vomiting with their attendant depression would account for.

Both Dr. Greenhow and Dr. Hogben state that after the rigor and vomiting there follows a hot stage with slight febrile reaction, and subsequently profuse sweating. I can not find evidence of these stages, or of any febrile reaction. Dr. Hogben writes of this so-called ague that it may frequently be seen in the out-patient rooms of our hospitals; as a matter of my own experience it is very rarely seen, if ever. The men accept the attack

as a natural consequence of their employment, and take small notice of it. Some, I believe, treat it by taking milk; most of those with whom I have talked usually treat it with beer and go to bed.

As to the cause of the acute attack: The chief metals used are copper and zinc. Small quantities of lead and tin may be used, and in addition, very small, but recognizable quantities of arsenic or antimony are present in crude zinc, varying according to the quality of the zinc.

Professor Turner (Professor of Metallurgy in the University of Birmingham), informs me that commercial zinc (spelter), varies in its composition, and that the amount of arsenic or antimony might vary considerably; it would, in any case, be very small. Commercial zinc has, it appears, much improved in purity during recent years. There is good reason to suppose that copper fumes do not cause these acute attacks. When the metal is molten, pale greenish flames rise from it, and the zinc deflagrates, giving off white clouds of zinc-oxide. There does not seem to be reason to suppose that zinc-oxide taken by the mouth would cause irritation. Dr. Hogben points out that such acute symptoms do not occur among other workers exposed to zinc fumes, such as the galvanized iron workers. He also mentions that the exhibition of oxide of zinc by the mouth is not known to produce any results comparable to brass-founders' ague. In order to prove whether the inhalation and ingestion of practically pure zinc (such as is used in laboratories), has any bad effect, I experimented upon myself, and on several occasions thoroughly inhaled the white fumes arising from deflagrating zinc; the zinc being deflagrated in a crucible, small amounts at a time. There was no effect beyond a slight laryngeal irritation, which any other powder might have caused.

There is, then, no definite evidence to the effect that the fumes of deflagrating pure zinc cause the attack. Spelter, however, as I have shown, is impure, and contains among other impurities, small and varying amounts of arsenic. Arsenic is also contained in considerable amount in the crude sulphuric acid used by the brass dippers. In this connection Dr. Oliver writes: "In my own experience zinc-oxide was administered to animals over a very long period, and in considerable doses; but when the drug was perfectly pure none of the rapidly fatal results occurred. Rabbits take it by the mouth for many months without seeming to suffer much discomfort; and in the mixing department of large color works men who breathe the dust do not, as a rule, suffer any inconvenience. It may seem to cause headache, nausea, vomiting and, cramp-like pains in the limbs; but as zinc-oxide is frequently impure, containing small quantities of lead and arsenic, these symptoms are more probably due to the adulteration than to the metallic compound itself."

The symptoms of brass-founders' ague correspond to the ingestion of an irritant; at first a sense of heat in the throat and stomach, and later on nausea, vomiting, sweating and depression. The fact that milk is used as a remedy also suggests arsenic. The amount of arsenic contained in impure zinc is only minute; but arsenic, being highly volatile, would probably be driven off from the molten metal with great rapidity, and in the early stages might be present in the fumes in a noticeable quantity. Antimony, if present, would not be volatilized. The dippers are also exposed to fumes of arsenious acid from the acid fluid used by them; this might account for their tendency to bronchitis.

Treatment.—The work people seem to be generally agreed that the acute form of poisoning is best treated by a draught of milk. This treatment suggests that this acute attack is due to the ingestion of an irritant, and, as I have previously suggested, it is possible that this irritant may be some arsenical compound given off from the molten metal. It is certain that it is only the mixers and moulders (those exposed to the fumes of the molten metal) who suffer from the acute attack; the polishers, finishers, etc., do not experience the so-called brass-founders' ague. There is some doubt as to the most effectual treatment of the symptoms of chronic brass-poisoning. Dr. Simon and others hold that potassium iodide is an effective curative agent, but I can not say that I have had good results from its exhibition. As a rule I have found the best line of

treatment to consist in the usual treatment for anemia (an aperient iron mixture), together with wherever possible the giving up of brass work for a period of time, at all events.

Dr. Murray claims to have found a specific in the shape of phosphorus. He was led to this treatment "on the empirical idea that sulphate of copper, being an antidote for phosphorus poisoning, phosphorus might, in some manner, exercise an antagonistic influence on copper." The objection to this empirical idea rests on the fact that sulphate of copper is only a mechanical antidote to phosphorus, it is reduced by the metalloid, the copper being deposited on the phosphorus (in the stomach), and rendered inert. There does not seem reason to suppose that there would be any such reaction between copper and phosphorus compounds when circulating through the blood and tissues. Dr. Murray recommends for a dose 1/30-grain of phosphorus, or fifteen minims of the dilute phosphoric acid. I have tried this treatment with no result beyond that which I should expect from the valuable tonic properties of phosphorus. In my opinion cessation from brass or copper work, together with suitable symptomatic treatment (for anemia, phthisis, bronchitis, etc.), constitutes the most valuable treatment.

The notification of brass-poisoning has recently been suggested, and I believe one or two cases of death have been certified as due to chronic brass- or copper-poisoning. In my opinion the notification of brass-poisoning must be considered as quite impracticable. As there are no definitely pathognomonic signs or symptoms of chronic brass-poisoning, and it remains to be proved that the acute attack is due to zinc or copper. Patients do not die actually of brass-poisoning, but from its long-continued results. Pulmonary tuberculosis is prevalent among brass-workers, but it would be illogical to notify a case of phthisis as one of chronic brass-poisoning, since the brass is probably only one of the etiological factors. The absence of pathognomonic symptoms renders notification impossible. It is to be remembered that every patient with a green tooth-line is not suffering from chronic brass- or copper-poisoning, just as a blue gum-line does not necessarily imply chronic lead-poisoning.

Prevention may be summed up in a few words; it must consist in efficient ventilation, including efficient extraction of the brass-laden air, combined with the personal cleanliness of those who handle brass or copper, and the use of some form of mouth and nose protection by the mixers and moulders.

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Neuralgia and Its Treatment.

BY VINCENT F. LENNANE, L. R. C. P., L. R. C. S. (EDIN.); L. F. P. S. AND L. M. (GLAS.).
Late Colonial Surgeon, Gold Coast.
London, England.

There are few more painful diseases than neuralgia, and there is certainly none which gives rise to such dire suffering. By some it is said to be merely a symptom, and not a distinct morbid entity, but this is a source of but little consolation to those whose days are made miserable, and whose nights are rendered sleepless by its unwelcome presence. Undoubtedly many cases of the so-called neuralgias are due to gross organic lesions, such as cerebral tumors and other diseases of intra-cerebral origin, but these do not fall within my category. Strictly speaking neuralgia is a painful affection of the nerve itself affecting either its origin, its course or its peripheral termination. It is essential to distinguish it from neuritis from which it differs in many important respects. What is spoken of in popular language as "sciatica," may be a neuralgia, but in the great majority of cases is produced by inflammation of the nerve fibers, and is a true neuritis. The pains of locomotor ataxy which so commonly affect the legs and are of the "lightning" variety, should not be described as neuralgia, although they may be "neuralgic" in type and character; they are the direct expression of the sclerotic changes which are taking place in the posterior columns of the cord. The same is equally true of many pains which roughly are classified as rheumatism or neuralgia. These terms are employed vaguely, and in a very indefinite sense, but the clinical

observer is more careful in his nomenclature.

With regard to symptoms, the pain is deep-seated, and corresponds to the position of a nerve-trunk, spreading along its course, or radiating with its branches. It is often one-sided, but it may be bilateral and symmetrical. It is shooting, stabbing, boring, burning, gnawing or throbbing; in its duration it varies considerably; it may last only a short time; for minutes or hours, and then subside entirely to return after an interval of weeks or months, or it may be continuous with exacerbations. After it has continued in one of these forms for some time, tender points may be recognized; spots on the surface of the skin, which are tender to firm pressure. They lie in the course of the affected nerve or its branches, and correspond to the point of exit of the nerve from a bone, where it perforates the fascia, where it passes over a hard surface, or where the nerve divides into branches, or where nerves anastomose. Another tender spot is frequently found, the point of Trousseau over the vertebral spine corresponding to the nerve affected with neuralgia.

There is marked tenderness of the skin over the painful part which may last after the subsidence of the pain. Occasionally muscular spasm takes place as a reflex effect in the region of the nerve affected, and vasomotor disturbances may be present, such as pallor, followed by flushing, sweating, lachrymation (in trifacial neuralgia), and edema. The hair may change color, or fall off, or it may grow in excess.

The evidence of diseases competent to produce pain in the region of the nerve affected should be sought for. The lesions likely to produce this effect vary in different parts of the body. Carious teeth may cause toothache, or without local pain may cause neuralgia in every division of the fifth nerve, or in the occipital region. Diseases of the bones and deep-seated tumors may involve the main branches of nerves. The cervical and brachial nerves are involved in caries of the spine. The brachial nerves are often the seat of neuritis. Intercostal pains may be due to disease of the ribs, caries or cancer of the vertebræ or spinal meningitis, tumors or aneurysm. Disease of the lumbar vertebræ, renal colic, and renal disease are responsible for pains in the area of the lumbar plexus, and sciatic pains are produced by disease of the sacro-iliac and hip joints, psoas abscess, pelvic tumors and tumors of the femur. Locomotor ataxy produces its shooting and stabbing neuralgic pains which are generally bilateral, and accompanied by other indications of the disease.

The pathology of neuralgia is obscure, but there is much in favor of the view that it is a disturbance of the nerve cells connected with the central end of the nerve trunk.

Neuralgia has been defined as the cry of the nerve for food, and undoubtedly in young people it is often due to anemia. The subjects are not infrequently young women who, as a result of defective social or hygienic conditions, suffer from amenorrhea, and whose erythrocytes, instead of numbering from four to five millions per cmm., are reduced to two million five hundred thousand, or even less, with a corresponding fall in hemoglobin value. Only too commonly they are the victims of chronic constipation and atony of the lower bowel. These cases, once recognized, are easy of treatment, and are amongst the most satisfactory which fall to the care of the physician. The first point is to regulate and improve the general conditions of the sufferer's mode of life. More exercise, fewer hours in bed, less stimulants, a regulation of the dietary and some serious course of work and intellectual employment are the key-notes to the situation. After that the bowels should be regulated and a copious evacuation should be ensured every morning, what particular agent should be employed for the purpose is a matter of little moment as long as it is effective; the homely domestic Epsom salts, the waters of the most frequently and largely advertised German Spa, or the synthetical products of the laboratory may be employed according to the idiosyncrasy of the physician or the length of pocket of the patient. The agent matters little, but the result must be attained freely and copiously. This paves the way for the administration of iron. For anemia of this type iron is the one and only remedy; arsenic and manganese and their various

combinations being of little or no avail. The form in which iron is administered is a matter of comparatively little importance, but personally I have a profound contempt for the scale perparations which, in my hands, have proved lamentably inefficacious. Whether an organic or an inorganic salt of iron be administered does not matter much, but the ferric and more astringent salts undoubtedly prove most efficacious. I do not wish to advocate any particular formula, but the following will, I think, be found useful:

℞ Tinct. Ferri Perchlor.....2 drachms.
Spts. Chloroformi .....1½ drachms.
Glycerini.....2 drachms.
Aquam.....ad.....8 ounces.
M. ft. mist. One ounce three times daily.

This should be taken three times a day, immediately after meals. Some people say that it should be sucked through a straw to prevent blacking of the teeth, but surely this is quite unnecessary. Then, again, some prescribers add to it sulphate of magnesium to obviate the possibility of constipation, but as a matter of practice it were better that the purgative should be given apart and distinct from the iron tonic. I am quite willing to admit that the addition of a few drops of tincture of belladonna or of tincture of nux vomica may be useful in stimulating the peristaltic action of the intestine, and possibly by increasing mucous secretion. A milder and less astringent preparation of iron is that known as Basham's Mixture. The formula I give is a modification of, and I think, an improvement on the original:

℞ Tinct. Ferri Perchlor.....2 drachms.
Liq. Ammon. Acet.....1½ ounces.
Sp. Chloroformi .....1½ drachms.
Syrup Limonis ..... ½ ounce.
Aquam.....ad.....8 ounces.
M. Sig.: Two tablespoonfuls three times a day after meals.

Here the iron is no longer in the form of the perchloride, but is converted into the acetate, which is very easily absorbed and assimilated. It is a powerful hematinic, and sends up the blood count, and the hemoglobin percentage by leaps and bounds. In cases of neuralgia dependent on anemia, it is a powerful therapeutic agent, and even when there is no obvious anemia it will often act as a stimulant to the functionally deranged nerves, restoring their power and alleviating the attacks of pain. In every case of neuralgia the possibility of a blood deterioration should be borne in mind, and even when a blood count is not resorted to the pallid condition of the mucous membranes of the lips and of the conjunctiva may afford a useful clue to treatment. It is useless to resort to what are called "specific" remedies unless the underlying constitutional condition is first taken into consideration. The physician who prescribes remedies for the names of diseases is but little likely to meet with success, and it is only by a broad grasp of the subject that curative measures can be adopted to individual requirements.

The site of the neuralgia, that is to say the nerve, or the branches of the nerve affected is often a guide to treatment. It is a matter of experience that supra-orbital neuralgia is very readily controlled by quinine. I do not think that it is important in what form it is administered, whether in a mixture or in a pill, or dissolved in sherry. The following is a familiar formula:

℞ Quininæ Sulph.....25 grains.
Acid Sulph. Dil.....25 minims.
Sp. Chloroformi ..... 2 drachms.
Aq. Cinnamomi..... 4 ounces.
Aquam.....ad..... 8 ounces.
M. Sig.: This should be given in two table spoonful doses three times a day, or every four hours if necessary.

When the branches of the fifth are involved Butyl-chloral-hydrate or tincture of gelsemium is indicated.

Another good remedy is chloride of ammonium, which should be given in forty-grain doses every four hours. It has a somewhat nauseous and bitter taste, which can, however, be more or less successfully disguised by the plentiful addition to the mixture of liquid extract of liquorice. I know of no particular guide or indication for the administration of this drug, but I do know that when it fails to effect a cure in forty-eight hours it is useless to continue it. In some cases it answers admirably, whilst in others it signally fails.

The internal administration of aconitine in the treatment of trigeminal neuralgia has been highly praised by Gübler and many other French authors, but its administration requires considerable care, and it must never be forgotten that while it is a very active alkaloid, it varies much in strength, this variation depending

partly on its source and partly on its mode of extraction. Speaking broadly, it may be said that the English aconitine is much more powerful than the French, and that the American crystalline form is infinitely more powerful than either. The following formula was introduced many years ago by Dr. E. C. Seguin:

Duquesnel's aconitine, from a twelfth to an eighth of a grain, alcohol and glycerin, of each a drachm, peppermint water to two ounces.

This forms a mixture of which a drachm should be given three times a day, cautiously increasing the frequency of administration until there is a commencing feeling of numbness, especially over the face. Directly this is experienced the administration of the drug should be suspended.

Phosphorus and arsenic I regard less as specific remedies for neuralgia than as agents which improve the general condition of the health and impart tone to the nervous system. There are many forms in which they can be conveniently given, but it is useless to expect a very rapid improvement, and their administration will probably have to be continued over a long period, possibly even for weeks or months.

There are many local applications which prove efficacious, and personally, I have a great regard for this liniment:

℞ Aconitine.....1 grain.
Essential Oil of Mustard.....1 drachm.
Glycerine.....1 ounce.
Rectified Spirit to.....6 ounces.
M. Sig.: Poison.

It must be applied sparingly and with caution, for aconitine is a very active poison; a fact, however, which should not preclude its use in skilled hands. The physician should always make the application himself, and never entrust the bottle to the keeping of the patient.

The unguentum aconitine of the British Pharmacopeia is another useful preparation for the relief of pain, and was introduced originally by Sir Benjamin Brodie. It, too, must be employed with caution, and only a very small piece should be smeared along the course of the painful nerve twice a day.

There are certain combinations of menthol which, painted on the affected part, speedily give relief, especially in facial neuralgia. I often use in this way menthol, thymol, chloral and camphor rubbed up together to form a syrupy fluid. Liniments composed of tincture of aconite, tincture of belladonna, tincture of capsicum and liniment of chloroform answer well, but if the belladonna is in excess it is apt to dilate the pupils and put the patient to temporary discomfort.

The custom has sprung up of late of using a one per cent solution of osmic acid, hypodermically, in the treatment of some forms of neuralgia, those especially affecting the branches of the fifth nerve. I have used it in a number of cases, and I can not speak of it enthusiastically. It must be used with caution, especially in the case of mixed nerves like the sciatic.

Change of air is undoubtedly beneficial in chronic neuralgia and neuritis, but much care has to be taken in the choice of a residence. Plenty of sun is the great desideratum. High altitudes, bracing air and the seaside usually increase the pain. I send most of my patients to Spa in Belgium. It is only a few hours' journey from London, Paris and Brussels. It is a bright, cheery little place, surrounded by pine forests, and the hotels are as good as any in Europe. Moreover there are the iron springs, the waters of which exert a beneficial effect in anemia.

Baths are useful in all neuralgias except those of the face. The bath must be hot and prolonged. The Balneum Alkalinum of the Guy's Hospital Pharmacopeia, containing four ounces of sodium carbonate in thirty gallons of water, may be used as a basis, but I usually add a suitable quantity of pure terebene, or some similar aromatic, or pine preparation. The effervescing carbonic acid baths of Spa are excellent, but they must be taken on the spot, for it is natural, and not artificial gas.

Operations, such as excision of a portion of the nerve, stretching or harrowing the nerve, or the removal of the nearest ganglion, may effect a permanent cure, as I have often seen, but these modes of treatment should not be resorted to until all other measures have been exhausted.

Can't get along without The Medical Brief.—J. A. Smith, M. D., Norway, Ia.

[Written for the MEDICAL BRIEF.]

Report of a Surgical Clinic.

BY A. SHIMONEK, M. D.,

Clinical Professor of Surgery in the Medical Department of Hamline University. St. Paul, Minn.

Case 1.—This patient, a lady of forty-six, sustained an injury to the left shoulder by being thrown out of her carriage. Examination by a physician, at the time, was negative. She was able to carry the joint through all its motions without much pain. In the course of a week or so the shoulder would ache on motion, and its range of mobility was interfered with. This condition of affairs continued to increase; the movements of the joint became more and more limited, pain developed even when the shoulder was at rest, until now, three months after the injury, she presents herself to us for aid.

The treatment at home was that of rest and counter-irritation. I have examined her on two occasions, and find that the joint can not be moved much, if any. The motion she shows is due, largely, to the mobility of the scapula. The musculature around the joint is sore and tender, but there is spastic contraction of the muscles. Pain is an important feature, radiating into the forearm and fingers. This prevents her from using the arm during the day, and from sleeping at night. Examination of the joint, together with fluoroscopic picture, excludes dislocation, fracture, and disease of the bone. Besides a little atrophy of the joint, nothing abnormal is to be found. Now, what is the condition of affairs, and what shall we do for the patient?

In the absence of any positive lesion, and the exclusion of rheumatism, a condition like this not infrequently follows slight injury, in which a slow form of inflammation develops and cripples some of the structures of the joint proper. In all probability we have a periarthritis. An affection, firstly, of the subacromial burse, with thickening of its sac walls and adhesions, preventing the superior part of the head of the humerus from rolling out over the tip of the acromion process of the scapula. This interferes with the upward motion of the shoulder joint. In all probability there is inflammation of the areolar tissue under the deltoid muscle, and, probably, an inflammatory condition of the musculature of the joint or myocytis, evidenced by the soreness and tenderness of the outside of the joint. These pathological lesions are responsible, to a great extent, for the immobility of the joint. The exudate and adhesions produce pressure and, probably, neuritis of the joint, which accounts for the pain, and the uselessness of the arm.

The treatment of a case like this is not rest, at any rate not a prolonged rest, for this favors anchylosis of the joint. It is action that is needed, and while the case has gone on this long, adhesions must be broken up under anesthesia, which we will do. Under anesthesia there is "snapping" under forcible motion, as the fibrous adhesions give way. This is followed by quite good rotation, giving the elevated and forward and backward motion. The after treatment is all important. For twenty-four or forty-eight hours we will allow the joint to rest after breaking up the adhesions, and then use intelligent massage and passive motion daily. In time the joint will be considerably improved, if not completely, though we must not promise the patient too much, for there are disappointments sometimes in such cases. If the joint stiffens up very much it may be necessary to loosen it again under anesthesia, and, probably, a third time. In these cases, if the patient does not grow discouraged and the physician treats them intelligently, a useful joint will result.

Case 2.—A lady, fifty-three years of age, gives a history of stomach trouble, extending over a period of twenty-five years. Her suffering has not been constant. She would have periods of what she called absolute health, for weeks and months at a time. Her family history is good, except for one relative who succumbed to gall-stone disease. She describes her periodical trouble as one of indigestion, followed by pain, nausea, and sometimes vomiting. She thinks she has had colicky pains once or twice, but never any pronounced colic. She has never been incapacitated for work, but had always to be careful about her diet. Any food not agreeing with her seemed to remain a

long time in the stomach, and cause eructations of gas for hours. Her present trouble commenced six weeks ago, with symptoms like her previous ones, followed by chills, fever and jaundice—prominent features in all her attacks.

I have examined her a number of times during the past week and find a poorly-nourished, emaciated, jaundiced woman; tongue coated, temperature runs from normal to 100° F.; pulse, rather rapid. Otherwise nothing unusual can be elicited. Over the gall-bladder area there is a tender region, and when the fingers are pressed in during inspiration and held there until she is asked to fill her lungs, she suddenly stops breathing, or rather the respiration suddenly comes to a halt on account of the severe pain. This is, in all probability, due to an inflamed gall-bladder, which comes in contact with the tips of the fingers. There is a sensitive spot directly back of the liver, a prominent feature in a great many cases of gall-stones. From this history and the symptoms, I believe we can reasonably make a diagnosis of cholelithiasis, cholecystitis, and an obstruction of the common duct by the stone. A straight incision was made in the right rectus muscle through the peritoneum. The examining fingers came directly in contact with a small, thickened, contracted gall-bladder containing stones. In the common duct above the duodenum is a good-sized stone, easily palpated. On account of the crippled condition of the gall bladder, I proceed to remove it. In order to have room for manipulation, the incision was enlarged by carrying it upwards and inward along the costal arch, making the incision known as the Mayo-Robson incision for gall-stones. Sometimes, if we are unable to elevate the duct sufficiently to reach the stone, it may become necessary to reach the liver by bringing it down below the ribs as far as possible, and then turning it upward, which, in some instances, will bring the ducts in a straight line, and almost on a level with the skin incision. Before making the incision into the common duct it becomes indispensable to pack away the peritoneal cavity. The next step is to pass the fingers into the foramen of Winslow, lift the duct, make an incision into it directly over the stone, when we now extract a large dark-green stone, with a number of prolongations. Then we make a thorough search, first, with the sound passing upwards toward the hepatic duct, and again downwards, back of the duodenum, for the purpose of discovering other stones. The sound is not always the surest means for this purpose. If the duct is sufficiently dilated, it may be necessary to introduce a finger upwards and downwards in order to locate stones higher or lower in the duct. However, the ordinary means of palpating the ducts outside is, in the majority of cases, sufficient to determine the presence or absence of stones. The recognized treatment of all of the best surgeons is that of drainage, which we will utilize in this case. Drainage is indispensable when the gall-bladder has been removed and duct opened. A tube the size of a small pencil is introduced upwards towards the hepatic duct, a cat-gut suture is passed into the incision below and above, and one through the tube and the duct to hold it in place. The pack walling, off the peritoneal cavity is next removed and a number of cigarette drains introduced, inwardly, outwardly, below and above the drainage tube, and we proceed to close up the peritoneal cavity. The drainage tube will be conveyed into a sterilized bottle (six-ounce size), which is incorporated into the outside bandage, and held there by adhesive strips. This drainage tube will remain in the duct until such time as the catgut suture which holds it in place is absorbed, which is from five to ten days. By that time the peritoneal cavity will have been sufficiently walled off to prevent the leakage of bile into it. Gauze packing, loosely applied, will be passed into this opening until granulation is complete.

Case 3.—Seven weeks ago this young man sustained an injury by forcibly falling on his right knee. Examination, a few hours after injury, showed a fracture of the patella. A fracture like this one can be produced by direct violence, or can occur simply by muscular action. The line of break may be transverse, oblique, vertical or stellate. This particular one is transverse. More or less hemorrhage takes place into the joint, following injury, and as a result of the formation of

blood clot, the synovial secretion is increased, so that we, ordinarily, have considerable effusion into the knee joint, resulting in a swollen and painful knee. We must not lose sight of the fact that in an old patient, with low vitality, generally this clot sometimes becomes infected, either from without, or through the blood within, and results in serious consequences. Fortunately, this is rare and occurs mostly in open fractures.

A thorough understanding of the method of treatment, be it conservative or operative, is indispensable to good results. In considering the operative treatment, or that of opening the knee and suturing the fragments together, we must not forget the possibilities of infection, with such serious consequences as complete anchylosis, amputation, and even death. If the synovial tissue in the knee joint were as invulnerable as, for instance, the peritoneum, which can take care of a goodly amount of sepsis, and we are sure of our asepsis, then the matter of treatment could be settled in favor of suturing in every instance. Before undertaking the operative treatment, this must always be laid before the patient. There is no doubt that the operative method is far superior to the nonoperative, and lays up the patient for a much shorter period of time, an important factor to a laboring man. Let no man make light of opening the knee joint, and let him only who is master of aseptic surgery undertake the operative treatment of fracture of the patella. This patient preferred and accepted the non-operative treatment. Elevation of the leg in a splint, ice packs, with moderate compression to favor absorption of the effusion. After six days, when this was accomplished, a long posterior plaster of paris splint was made, reaching from the upper third of the thigh to below the patella. The lower fragment of the fracture was raised as high as possible with a strip of adhesive plaster pulling upward; then the upper fragment was pulled down and coapted to its fellow, as well as possible. A long strip of adhesive plaster, pulling downward, was applied. A well-folded compress was placed over the site of the fracture, from which another band of adhesive plaster was applied, the direction of pulling being directly upwards, for the purpose of preventing the tilting of the fragments upwards. To keep the quadriceps extensor muscles at rest and relaxed, a curved splint, well padded, was applied over it, and held in place by adhesive plaster strips. This apparatus was inspected daily, being kept constantly in an elevated position. After the second week daily massage was employed to prevent atrophy. At the end of four and a half weeks this apparatus was substituted by a plaster of paris bandage enveloping the whole limb, and extending as high as the groin. At the end of three weeks it was split anteriorly, and passive motion and massage was used and is still being used. The fragments are now in pretty good apposition, and we have already a good range of motion. At the end of three months all apparatus will be removed, and only a firm cotton, or better, an elastic webbing bandage will be applied, and he will be allowed to walk with the aid of a cane, holding the limb in an extended position. The union, after such treatment, is mostly fibrous, due, probably, to the intravention of the anterior part of the capsule between the fragments. The union after good suturing is often bony and, therefore, superior to the non-operative treatment.

These patients must be told to be extremely careful in walking, for the knee remains weak for a long time, probably nine months or a year, or more. Should the fragments, under this treatment, become gradually separated or non-union take place, a resort to operative treatment is necessary.

Case 4.—The history of this little girl, ten years old, is rather indefinite. Her father states that fifteen months ago she became sick, with pains in the abdomen, fever, lack of appetite, emaciation, and, sooner or later, effusion into the peritoneal cavity. This condition of affairs persisted for a long time, and she was under the care of physicians who pronounced the case, in all probability, tuberculosis. She lingered for months and, eventually, made a fair recovery. She was sent to a child's asylum and, sometime after, had an attack of very severe colic.

She was seen by a physician, whose diagnosis we do not know. She continued

to have pain in the abdomen, fever and chills until a swelling occurred in the median line, midway between the symphysis pubis and the umbilicus, which raised to the size of a hen's egg. This was opened and discharged a large quantity of foul-smelling pus. This opening has remained up to the present time. Some months ago she was treated for this sinus by dilating it, washing, etc., and it was found that the fluid passed into the rectum. The father states that one of her physicians was able to pass a strip of gauze through the opening and out through the rectum.

On examination, the sinus is that of a small opening in the median line, admitting a probe, which can be passed down for a length of five inches.

The only possible hope of a complete cure in a sinus of this character, is the opening of the abdominal cavity and following the tract to its bottom, excising it. This may be a formidable task, inasmuch as the inflammatory process which led to the formation of the opening, has, in all probability, created extensive adhesions betwen the bowels and the sinus. We will begin this proceeding by first passing a probe as far as it will go, packing absorbent cotton around it, and applying a coat of collodion, which will prevent any of the septic material from entering the peritoneal cavity during the attempt at removal. The sound in the sinus is an important thing, inasmuch as it will act as a guide to the operative procedure. I now make a median incision above the sinus, carrying it around the fistula on both sides, and down the median line below the sinus. We must be extremely careful in separating the fistulous tract, because of the probable adhesions of the intestines to the walls of the fistula throughout its whole length. After having entered the abdominal cavity on all sides, keeping the fistulous tract, with its guide well elevated, I find that we have cut through a loop of intestine, and will proceed at once to close it up with a Lembert suture. The intestine was so intimately adherent to the sides that it was almost impossible to make a separation without wounding it. Below the fistulous tract I found a large, flat and flabby mass, adherent for several inches to the tract, and as the mass seems to lead back of the symphysis pubis, I am suspicious that it is the bladder. To remove all doubt I have one of the assistants pass a long probe into the bladder through the urethra, and find at once that it has passed into the mass, corroborating my suspicion. My next step is to separate it from the fistulous tract. On account of its intimate adherence I have already cut through the bladder for a distance of one inch, which I will immediately close by a double row of sutures, and then proceed with the separation. I am now able to pass the fingers below the attachment of the bladder, bringing them up and elevating the bladder, so that I can make a separation without any further injury. I find that the bladder is free from the lower part of the fistulous tract, and we will allow it to drop into its place in the pelvis. I have raised the fistulous tract, with its adhesions, almost out of the abdominal cavity, and in doing so I find that I have torn, probably, the ascending colon, which will be stitched immediately by continuous Lembert suture. I find that in making the separation I am breaking into the fistulous tract constantly. However, it has been sufficiently sterilized with pure carbolic acid so that we may not expect very much infection from it into the general peritoneal cavity. After dissecting out the tract to the extent of three or four inches, I suspect that it leads into the sigmoid flexure or the rectum which suspicion was verified by an assistant passing a long, straight sound into the rectum, showing a discharge of blood from the rectum, signifying that the sinus is in direct communication with that portion of the bowel. This simplifies matters, in that I am down to the opening in the large bowel on the left side, and will now remove the guide and proceed to close up the opening in the bowel. I find there is considerable exudate around this opening, and the stitches do not hold, so they will be passed quite a distance from the opening, and the perforation turned in, and over it, we will sew the sutured pieces of omentum in order to strengthen the perforation. The fistulous tract is now practically removed, and the opening in

the rectum closed, drainage is secured through two good-sized cigarette drains, and the abdominal cavity is closed. If this patient does not become infected by the injury done to the intestine, and she recovers from the immediate effects of the operation, I believe that she will be permanently cured.

Case 5.—An acute case of appendicitis. The first attack commencing last Sunday night, characterized by sudden and severe pain in the epigastric region, after some hours radiating down towards the ileocecal region, accompanied by vomiting, and followed by a rise of temperature. He was seen on Monday morning and a hypodermic injection of morphine given for pain, and for some reason the operation was delayed until now. He has a temperature of 101° F., with a pulse of one hundred and twenty; he is slightly jaundiced, and has moderate commencing distention of the abdomen.

In considering the subject of operative procedure in acute infections of the appendix, the sooner it is done the better. Say, within a few hours after the attack, or up to forty-eight hours, being, probably, the best time to operate.. If the patient, after the third day, is suffering seriously from an infection outside of the appendix, it is probably the better plan to carry out the conservative treatment of no feeding, ice packs and a little opium to relieve the pain, until such time as the disease becomes localized by nature. This may be after six or seven days. In this particular case we are operating sixty hours after the attack, and it is probably well that we have, for we find a gangrenous appendix, with pus in the peritoneal cavity. This patient is slightly jaundiced, and his expression is that of one who is considerably infected. I do not think the waiting plan, in this case, would be of any especial benefit, as the appendix is gangrenous. No elaborate amount of work is necessary in the matter of inverting the appendix into the cecum here, on account of the exudate, and the softened condition of the parts. Drainage is an indispensable feature in a case of this kind, and I will pass three cigarette drains, consisting simply of a rolled piece of gauze, with a rubber tissue around them down back of the cecum, and put in a few stitches into the abdominal walls. We have such free drainage here that I am hopeful that a general septic peritonitis may be avoided.

Defiel Building.

[Written for the MEDICAL BRIEF.]

Differentiation of Variola Simplex From Varicella.

BY N. C. SCHILTZ, M. D.,

Professor of Internal Medicine and Physical Diagnosis in Drake University College of Medicine. Des Moines, Iowa.

The following differentiation is made from the appearance of the eruption, excluding all constitutional symptoms and history of the case.

In small-pox the eruption usually makes its appearance on the fourth day of the disease, is papular in character, with a shot-like hardness, occurring first, usually, on the face and wrists, then extending rapidly over the general surface and the extremities, including the palms of the hands and soles of the feet. Within the next day or two the papules change to vesicles, with turbid fluid contents, and continue to increase in size. The next two or three days a pustule is formed. The vesicle gradually increases in size to that of a split pea or larger, and their uniformity of size is quite characteristic. Many vesicles are slightly umbilicated in the center. This umbilication is very characteristic. The wall of the vesicle appears thick and leatherlike. The tension within is great, therefore the vesicle is hard, resisting and painful. Puncture of the vesicle with a needle does not cause its collapse, nor does the fluid all escape. This is partly due to the peculiar structure of the vesicle and the thickness of its walls. The base of the vesicles is perfectly round, with a dull red areola about them, and soon become grayish-yellow in appearance, losing their umbilication, and change to pustules. After the second or third day the pustule desiccates, causing the secondary umbilication, and in a few days a crust has formed which, later, drops off and leaves an ulcer, varying in depth according to the severity of the disease and the amount of irritation to which the lesion has been subjected. The prominence of the scar depends upon the depth of the destruction of tissue by ulceration—some-

times leaving little or no scar, and in other cases very marked pitting.

In varicella the eruption appears within the first twenty-four hours after the first symptom of the disease, and not infrequently no symptom has been noticed until the eruption appears. The eruption appears as pimples, and in a few hours the vesicles are formed, with or without a bright-red areola. The vesicles continue to appear in successive groups for several days, and when the last appears the first lesion may desiccate. These vesicles are brilliant in appearance. They vary in size in the individual affected, some as small as a pin's head, while others may be as large as a ten-cent piece, and are for the most part angular, instead of round, as in discrete small-pox. The vessel wall is very thin, and collapsible and wrinkles when the contents are let out. One puncture drains the whole vesicle. At the end of the second or third day some of the lesions begin to desiccate, while others are just beginning to form vesicles. These groups of vesicles may continue for several days, or a week. There is no primary umbilication, but occasionally an umbilication, due to the desiccation in the center of the vesicle, occurs. This in small-pox is called the secondary umbilication. Rarely, if ever, does this eruption appear on the soles of the feet or palms of the hands. It is, moreover, a disease of childhood and very rarely occurs in adults.

235 K.-P. Block, Sixth and Locust.

[Written for the MEDICAL BRIEF.]

Infant's Cry in Utero—Can It Be Heard?

BY B. P. WATTS, M. D.,
East Galesburg, Ill.

I have frequently heard persons say (one an old medical man) that they had heard the infant distinctly cry in utero many days before the termination of gestation. I have been in active practice of medicine, and have had abundant experience in obstetrics ever since I was eighteen years old, and am now fifty-seven, and I have failed to meet with such an experience, and can not believe it was the infant they heard. Is it possible? Will the editor or some of the many BRIEF readers inform me.

[Written for the MEDICAL BRIEF.]

Observations Upon the Course and Treatment of Three Cases of Epidemic Cerebro-Spinal Meningitis, Spotted Fever.

BY J. B. KINLEY, B. SC., M. D.,
Dean Denver Homeopathic College and Professor Theory and Practice in Same.
Denver, Colo.

The purpose of this article is to show the course and treatment of three typical cases of cerebro-spinal meningitis. The first case was that of R. P., aged ten years, a boy of unusually good constitution, good habits and appetite, never had been ill but once in his life, that was a slight attack of pneumonia about two years ago. The family history is particularly good. He was taken ill about midnight of March 29. He went to bed the night before in comparatively good health, waking his parents about midnight because of a violent headache; this increased rapidly until he was partly unconscious. I was called about 3:30 o'clock that morning. I found him suffering with extreme prostration, projectile vomiting, wild and violent delirium, screaming at short intervals so violently that I heard him two blocks away. On examination I found his skin hot, semi-conscious, constantly moaning; pulse, one hundred and twenty; temperature, 101° F. Opisthotonus of the most extreme form that I had ever seen. He was drawn back, forming a half circle. I prescribed stramonium, 3x; I called again about nine A. M. that morning and found the entire body covered with a petechial eruption; color, purplish or bluish, two spots appearing like a ecchymosis, two inches in diameter. Severe myalgic pains, hyperesthesia general. At this time I sought Kernig's signs and Babinski's reflex, and found both very prominent. All symptoms had increased, except the opisthotonus, which was now slightly relaxed. I continued the same treatment, but used, in addition, an ice cap. On March 30, no improvement, except a little more relaxation of the opisthotonus. On the following morning I found the facial muscles in extreme rigor. There was an appearance on his face, as of great fear,

mingled with pain, but no consciousness. The appearance of this boy was one that I shall never forget. It is said that Dore, in making the illustrations for Dante's Inferno, took for his subjects patients which he had seen suffering with the plague. I think he could not have seen spotted fever, the expression was so much more terrible. At this time the opisthotonus had partly relaxed. There had been no movement of the bowels. A high enema succeeded only in bringing a few very hard, black lumps of fecal matter, about the size of a hazelnut, appearing as if they had been burned or baked. I discontinued the stramonium and prescribed instead, opium, 30x. Temperature had now fallen to 99° F., the eruption was fading, there was stertorous breathing, very much resembling the Cheyne-Stokes breathing; the pupils were contracted, there was diplophobia, with ptosis.

On April 3, temperature was 100° F., the pulse weak, one hundred and thirty; prostration increased, the patient was extremely restless; he was now partly conscious and continuously crying out. I prescribed arsenic third. Two days afterward the prostration was lessened. The joints were exceedingly painful and swollen, having the appearance of acute arthritis. I prescribed cimicifuga. His symptoms improved, but the restlessness increased; cerebration slow; emaciation increased. He became very thin and weak. Bed sores, with a purple base, and sloughing appeared on his hips and back. His appetite was good, but there was practically no taste; castor oil or beef tea tasted the same to him. He had no knowledge of what he ate, and was constantly hungry, yet his emaciation continued, and evacuation of the bowels could only be had by giving a laxative or enema. From this time on his treatment consisted of cicuta vir.

This boy's condition, physically as well as mentally, remained practically the same for four weeks, at the end of that time, and at the present time, his mental condition is very slightly improving. Physically, he is gaining a little in flesh, his bed sores are healing, but his knees are bent, causing him great pain when his mother attempts to straighten them. At this time it is very uncertain as to whether he will or will not recover. In the last two weeks I have prescribed for him iodide of arsenic, 3x, with apparently fair results.

Case 2.—C. L., a boy, aged eleven; very bright mentally, but not particularly strong physically. He has never had a severe illness. His father came to Colorado because of asthma, with a tubercular tendency. His mother is healthy. On April 24, I was called at four o'clock in the morning and found the boy unconscious, screaming with what seemed to be pain in the head. His screaming very much resembled the hydrocephalic cry. He had vomited severely; opisthotonus was present, although not as severe as in the former case. Pulse, one hundred and thirty; temperature, 102° F. I prescribed stramonium, as in the former case. On the evening of the same day I found the opisthotonus somewhat relieved, consciousness had partly returned. He complained of extreme headache and backache, which he afterward explained was in the spine. There were the typical eruptions, but few in number, probably not more than twenty petechial spots. I discontinued the stramonium and prescribed cicuta, instead. The next day I found him practically the same, with diplophobia present. Hyperesthesia very great. Cheyne-Stokes' breathing very marked and threatening to stop breathing altogether. At times he would stop breathing entirely, and his mother would revive him by shaking him or slapping his face with a wet towel. Constipation, as in the former case, was extreme. The same burned-appearing stools, resulting only from enema; the pupils were contracted. Kernig's sign and Babinski's reflex present, but not as pronounced as in the former case.

I prescribed opium, 30th, in alternation with cicuta. The following day he had a full stool; opisthotonus had disappeared. His temperature was 100° F., pulse still one hundred and thirty; great restlessness and prostration now appeared. Emaciation began, vomiting had ceased, screaming but seldom, pain in the head and neck not as severe as before.

On May 1 he had decidedly improved, but more restlessness, more emaciation, no appetite, hypersensitive, pains in the joints of an arthritic nature. I again pre-

scribed cimicifuga, which in two days relieved the arthritic pain, but did not improve the general condition. I again resorted to cicuta, which, after one week, seemed to be of considerable value to him until about the middle of May, at that time I changed to iodide of arsenic, which, after one week, seemed to restore him to almost normal condition. I discharged him, cured, on May 26. Since that time I have seen him repeatedly, but have found no necessity for further treatment.

Case 3.—P. S., aged sixteen years; a very ardent student, carrying two grades in his school at one time. His teacher considered him one of the brightest students in her school; no ailment for several years, but at the age of three had had a severe attack of scarlet fever, from which he recovered nicely, except an impediment in his speech. He was rather large for his age, of athletic build. This boy was physically and mentally in excellent condition.

On May 26th, he was taken ill with spotted fever, with two others of his school. One of his schoolmates died within forty-eight hours. I was called at noon of the day he was taken ill, but, not thinking that the boy was severely sick, I did not see him until six o'clock. I found him delirious, talking continuously of his studies and sports, and complaining very severely of pain in the index finger of his right hand, which he had bruised the day before, but upon which there was practically no abrasion. Vomiting was severe, pulse one hundred and twenty-four; temperature, 101.2° F.; opisthotonus quite severe. I again prescribed stramonium, with marked benefit. On the following day he had extremely severe pain in the head and neck; delirium. His father and older brother being compelled to hold him in bed all night, owing to his constant desire to leap from the window. His attention seemed to be directed to one window, but his attendants succeeded in getting him back to bed.

I prescribed sodium bromide in five-grain doses every hour until three doses were taken. He became somewhat calm, but his mind was very much affected. His delirium would recur at short intervals, and his opisthotonus was now very much relieved, yet a little bending of the neck remained for at least ten days.

On the third day I put him on cicuta, as in the former cases. His delirium gradually calmed, but the pain in the head and neck seemed to increase, so that he would scream wildly, even more so than the two previous cases. The petechial eruption, in this case, was less than in the others. We found only twelve spots and none of these very large. After the fourth day they gradually disappeared, and his symptoms also diminished. He improved very nicely until the end of ten days, when a second fever appeared; temperature, 104° F.; pulse, one hundred and forty. He again became delirous, but no opisthotonus. The Cheyne-Stokes' breathing appeared, but mildly. The symptoms readily yielded to cicuta. Immediately after this the arthritic pains appeared in him, as in former cases, but soon yielded to cimicifuga. From this time on his recovery was good. He did not become as much emaciated as either of the other cases. His mind cleared up rapidly, and his physical strength increased so that at the end of one month, he was well.

Observations.—I wish to call particular attention to the fact that in each of these cases the hygienic conditions were somewhat similar. Two of them living in frame houses, standing very near the ground. Sanitation not modern, although not poor in either case. In the home of Case No. 2 the sanitary conditions were fair, but their flat was in a basement. In each of the three cases modern sanitation was absent.

Another feature that I wish to call attention to is, that in each of the three cases Kernig's sign and Babinski's reflex were present, and aided much in arriving at a diagnosis. In each case the petechial eruption was present, but in proportion to the severity of the cases. Babinski's reflex was also proportioned to the severity of the case in Case 1, which was by far the worse; even at this time the great toe of the right foot is almost constantly at right angles with the foot, although it relaxes at times.

Another feature, is the same form of constipation, and inability to get a movement, except by high enema or cathartics,

and the best result in each case was obtained by opium 30x, which produced in each case a satisfactory passage. The remedy, cicuta, was given in each case, and was very satisfactory. When the time came for completing absorption in the meninges of both the brain and spine it was necessary to change to the iodide of arsenic, and this last remedy did its work in each case satisfactorily, except the first, which even now bids fair to recover.

The diagnosis in case No. 1 was corroborated by Dr. W. H. Sharpley, Health Commissioner of Denver. Dr. J. W. Craig attended each of the three cases for me for four days during my absence. Dr. A. C. Stewart saw all of the cases with me, in consultation, when the matter of the probable loss of mentality became an alarming feature, but now it appears that while two of them have completely recovered, both mentally and physically, it is also probable that the third may recover.

1414 Glenarm St.

[Written for the MEDICAL BRIEF.]

Blood Making.

BY J. M. KEYS, M. D.,

Formerly Dean of Lincoln Medical College of Cotner University and Professor of Practice of Medicine in same.
Omaha, Neb.

We hear much about good and bad blood, and blood-making among the laity, especially in the spring time, when they resort to all sorts of drugging in order to rectify some imaginary wrong of the blood. Just why they should require special treatment for the blood in the spring is not quite clear. Some insist that the blood is too thick; others say it is too thin, but all agree that blood medicine is necessary. This affords an opportunity for the druggist to show his interest in the welfare of the public by furnishing them with a full stock of blood medicines.

Judging from the usual prescriptions the majority of physicians have not improved much on the methods practiced by the laity and the druggist in regard to blood-making. If the modern doctor be consulted he will look wise, assume an air of profound mystery while he takes the family history, and then procure a few drops of blood for microscopic examination. This is followed by a very scientific report of the number of red and white corpuscles, and the usual prescription of some compound of iron. Of course, this scientific knowledge is valuable as well as impressive, and the patient readily pays the fee demanded.

It is surely time to be getting away from these relics of the past. The sooner the doctor realizes that iron and other drugs do not make blood, the better it will be for him and his patients. Then how shall we make blood? There is only one way, and that is the physiological one. There must be complete digestion and assimilation of food, and in addition to this the proper food. If this be true then the process of blood-making depends on any means that will promote digestion and assimilation, and not necessarily on medicine. Hygiene, massage and mental or suggestive therapeutics have a place here. Any departure from the natural or physiological standard of health must be noted, and the proper means used to correct it. There may be some wrong of innervation or circulation; some derangement of the glandular or lymphatic system; and often excessive acidity or alkalinity of the secretions of the blood itself. Besides this, retrograde metamorphosis may be slow from deficient cellular activity, leaving the system burdened with waste matter.

Now, in order to intelligently use remedies we must have some definite knowledge of pathological conditions, and not merely names of disease. The condition of the blood may be judged by an examination of the parts that are freely supplied with it, such as the mucous membrane and tongue, as well as the skin and its veins. It may be shown by weakness, pallor and lowered temperature, or a clear, waxy color of the skin, with a tinge of yellow or green, as in chlorosis. Another means of diagnosis is by the use of the microscope to determine the relative number of red and white corpuscles. But this usually results in the same old routine treatment of iron and tonics without regard to the cause. To the specific medicationist the relative number of red and

white corpuscles does not mean much, as it only shows the result of some derangement, while it gives but little, if any idea, of a remedy or the location of a lesion. All modern authorities agree that the blood should be slightly alkaline, and that the pabulum, when ready for absorption, must be the same in order to make good blood. If, at any time, the blood plasma becomes acid a retrograde change takes place in the body, and all the alkaline cell-salts are withdrawn from the tissues—a condition which takes place in all continued fevers to a greater or less extent. On the other hand, there must be an acid condition of the contents of the stomach to digest albumin and fibrin of meats and gluten and starch of cereals. If this become excessive digestion is impaired, both in the stomach and small intestines. The acid or alkaline condition may be known by the color of the mucous membrane of the mouth and tongue, or by the secretions, and indicate the remedy for each. The pallor of the mucous membrane with white coating of the tongue requires sodium potassium or magnesium salts, and occasionally the calcium salts, while the increased color demands the fruit or mineral acids, and sometimes iron and the special sedatives, in small doses. We would select them as specifically indicated. Phosphate of sodium 2x should be given when there is pale mucous membrane, acidity of the stomach and acid secretions. Magnesium phosphate 2x is the remedy for fermentation and pain in the stomach and small intestines, and for constipation. It also increases digestion and assimilation of food.

Calcium phosphate 3x is a valuable aid to tissue building and blood-making after exhaustive diseases or loss of blood, and as an aid to the digestion of fatty foods.

Postassium phosphate 3x increases innervation when there is great mental strain and insomnia, with muscular weakness. This remedy has no equal in these conditions. It has an affinity for the brain and nerve centers, and will restore and maintain normal activity.

Magnesium dioxide 1x is one of the late remedies not in general use. It increases oxidation and prevents fermentation and decomposition of food in the stomach and bowels, while it facilitates the elimination of waste products. This is one of our best blood-makers, and should be in general use.

For the opposite condition, showing increased color of mucous membrane and dark coating of the tongue, inclining to dryness, the acids are indicated. The fruit acids, or lactic acid, are indicated in all milder cases, while the dilute hydrochloric acid is preferable in chronic cases, showing dry, red tongue without coating, but in order to get best results it must be thoroughly diluted with water, one part to a thousand, assist digestion and assimilation of food, while any stronger preparation retards digestion. Baptisia is indicated in all cases showing a tendency to decomposition and the formation of ptomaines or toxins. Its action on the intestinal mucosa and glands renders it valuable in intestinal indigestion when indicated.

Among the prominent glandular remedies are the following: Phytolacca, rumex, iris, polymnia, ceonanthus, chionanthus, chelidonium and podophyllin, in small doses. These act on the liver, pancreas, spleen and other intestinal glands. It has been demonstrated by recent investigation that the action of these glands and lymphatic system destroys toxins in the blood, and completes the elaboration of food after it has reached the circulation. As the intestinal digestion is frequently defective, and must be supplemented by the glandular and lymphatic system, the action of these glands becomes very important in assimilation and blood-making.

The quality of the blood should not be judged by the relative number of red or white corpuscles, but by the quality of plasma. The blood plasma must furnish everything for the nutrition and repair of the body, and nothing can be carried to the tissues in any other way. While the red corpuscles only carry oxygen to the tissues, and in return receive carbon dioxide. They only carry what they get from the air, and the product of combustion and no nutriment for tissue building. The blood plasma is the most important factor in blood-making as well as tissue building. It carries both oxygen and nutrition to the cells by permeating the

inter-cellular spaces where neither the white nor the red corpuscles can pass.

Now if this be true then it is much more rational to direct our remedies to the correction of defects in plasma making, and leave the red and white corpuscles to take care of themselves, as the plasma must furnish the necessary material for the production of both.

Sixteenth and Dodge Streets.

[Written for the MEDICAL BRIEF.]

Notes on the Pathology of Placenta Previa.

BY W. H. WENNING, A. M., M. D.,

Professor of Clinical Gynecology, Miami Medical College, Cincinnati; Professor of Gynecology, Cincinnati Polyclinic.
Cincinnati, Ohio.

The placenta may be said to be previa when it is inserted wholly or in part to that portion of the lower uterine segment which is subject to distention in pregnancy or labor.

In accordance with this definition the locality and amount of implantation will further determine the variety or form of placenta previa. The typical variety is that known as placenta previa centralis, in which placental tissue covers the os uteri over its whole periphery. A better term, therefore, is "placenta previa totalis," or complete placenta previa. By lateral or partial placenta previa is meant a condition in which placental tissue covers the os internum only in part; it is, therefore, an incomplete placenta previa. Marginal placenta previa is simply a low insertion of the placenta, but sufficiently high that its margin reaches to, but does not cover the os internum. While the onset of hemorrhage, the amount of blood lost, the time of its occurrence, are all of the utmost clinical importance, we can arrive at a true understanding of the facts only when we approach the subject from an anatomical standpoint. The normal development of the uterus in pregnancy, with its contents, the impregnated ovum, must first be thoroughly understood before we can fully appreciate any deviations from the normal.

The uterus of gestation is divisible into three parts, anatomically and physiologically distinct from each other when pregnancy nears its end. The body of the uterus is divided by the contraction ring into two parts, the cervix forming the third. The physiological function of the cervix proper becomes operative only during the progress of labor itself. It is well known that when the ovum enters the cavity of the uterus it is most apt to be caught in a fold of thickened decidua, near, but below the orifice of the uterine ends of the oviducts. We have, therefore, a cavity of considerable dimensions in the upper part of the womb. Normally the ovum is arrested at a spot not far below the entrance of the tubes. This is evident from the fact that in the great majority of instances the placenta has been found attached to the side of the uterus. If the ovum strikes the most dependent part we will have the lowest insertion of the placenta. If the ovum does not fall quite so low, but at a point near the border of that ring, which afterwards becomes the contraction ring, we have a lower implantation of the placenta. But in both instances we shall encounter a placenta previa, the situation of the ring of Bandl determining whether it shall be previa wholly or in part. If the placenta remain partly above and partly below this ring, we have a partial or incomplete placenta previa. If, however, the placental attachment be entirely below this ring, we shall have a total or complete placenta previa. In consequence of the distention of the lower segment in the last months of pregnancy and the contraction and retraction of the middle zone in labor, there will be more or less hemorrhage.

If the placenta be implanted wholly above the ring of Bandl we will have a safe insertion, a truly lateral implantation of the placenta, but not previa. When the ovum becomes attached to the fundus of the uterus, the placental attachment becomes fundal, but owing to the anatomical relation of the tubes to the cavity of the uterus and the influence of gravity in determining the implantation of the ovum, I regard the fundal implantation of the placenta as very rare.

The normal attachment of the placenta, in my estimation, is that portion of the uterus, which afterwards becomes the middle segment or equatorial zone.

In the early months of pregnancy the area of implantation is very small; the lower uterine segment very short; hence for a while at least, the placenta will develop in conformity with the growth of that portion of the uterus to which the placenta is attached. With the advance of pregnancy, however, the anatomical changes above described take place in the lower uterine segment. The uterine wall above becomes thicker and prepared for contraction; below it becomes thinner, and this portion of the uterus expands. The placenta, if attached to the lower zone, will, for a while, at least, participate in the changes that take place in the wall of the uterus; thus: first, there will be an enlargement at the seat of attachment, then as the lower uterine segment becomes distended the placenta also expands. Finally the limit of expansion is reached, and then one of two things must happen; either, if the insertion upon the uterine wall be unusually firm or extensive, partial rupture of the placental tissue takes place, or, which is more common, separation of the placenta from its base, results. In either case there will be hemorrhage, and we thus have the explanation of this cardinal symptom of pregnancy.

5 West Eighth Street.

[Written for the MEDICAL BRIEF.]

Liability of Physicians in Cases of Malpractice.

BY CLAUDE S. WILSON, A. B., LL. B.,

Professor of Medical Jurisprudence in the Nebraska College of Medicine.
Lincoln, Neb.

In this day and age, when unscrupulous persons are longing for an opportunity to recover damages from every possible source, on almost any pretext, as an easy way of getting along in the world, it behooves the man of responsibility to fortify himself against such attacks. Statistics show that at the present time damage suits make up a large proportion of the litigation with which our courts are compelled to deal. No doubt some of these cases have merit, but many more are instituted with the end in view of securing a settlement, or, if finally tried, that the tender-hearted jury will reward the efforts of the plaintiff sufficiently to make the attempt worth while. In nine cases out of ten the plaintiff secures the services of counsel upon the understanding that the attorney shall be paid only out of the recovery, and as the latter is out nothing but his time, he has little to lose and may, perhaps, gain a large fee. Aside from the corporations, which to many seem to be a legitimate object of prey, the physician perhaps stands forth as the greatest attraction for these thorns in the side of humanity. Many a practitioner, when he attempts to collect a bill for services rendered, is confronted with the information that the treatment or operation has not been successful, but, on the other hand, absolutely detrimental, and that he or she is contemplating bringing action for damages by reason thereof. In many instances the intention of bringing the damage suit did not arise in the mind of the patient until he had been pressed to pay the past due claim. And many of them take this means of discharging a just indebtedness. Realizing that a damage suit is annoying, if nothing more, many physicians will drop the matter and cease to press the collection of the account, rather than have any further difficulty with it.

It is a difficult matter to put a stop to such practices, and so long as the spirit of graft predominates just so long will the physician be confronted with such obstacles.

In this article I wish to call the attention of the physician to a few things which in the future it may pay him to remember. Many people are of the opinion that a physician must treat any patient who applies to him for assistance. This is not true, for the physician may, like the lawyer, refuse any case. "Wharton on Negligence," Section 731, in speaking of the rights and liabilities of the physician, says: "No question can exist as to the legal right of the physician, unless he be an officer of the Government charged with specific duties which he thereby violates, to decline to take charge of the particular case." On the other hand, once having

accepted a case the law at once sets in operation certain implied duties on the part of the physician, failure or neglect of which will render liable in civil damages to the patient. A physician who undertakes to treat a case contracts with the patient, impliedly under the law, that he possesses ordinary skill and experience. Also that he will use, in the treatment of the case, a reasonable degree of diligence. Relative to the first point, it might be stated that it is difficult to determine just what constitutes ordinary skill. It can not be measured by any fixed rule, is not a question of law, but one for a jury to decide from the evidence produced at the trial. It is evident that the law demands greater skill from a physician practising in a metropolis than from one who confines his work to a village. The law recognizes the advantage which large cities offer in the way of hospital facilities, experience, etc., and increases the burdens of those physicians who are able to enjoy the same.

As suggested above, not only does the physician who undertakes to treat a case contract with the patient, under the law, that he possesses reasonable skill and experience, but he also impliedly agrees to use all care and diligence in the entire treatment of the case; the bandaging, the dressing, the diet, must all be looked after, and to neglect any part of the same may cause the patient serious trouble and perhaps death. Such carelessness on the part of the physician will not be excused, and he will be held for any damages suffered by his patient by reason thereof. Under the law a physician or surgeon, in undertaking to treat a case, does not become an insurer or guarantor to cure. The law says he must do the best he can, and if he does his duty and bad results follow he can not be made to answer for any damages. Should, however, the physician be so foolish as to enter into a contract in which he agrees to cure his patient, the law will hold him strictly to it, and a failure on his part will make him answerable in damages. In such case he will not be permitted to plead unforeseen contingencies, for the law supposes he took all such things into consideration at the time the contract was made.

Some people are of the opinion that gratuitous service on the part of the physician will exempt him from damages, but such is not the case. It makes no difference whether the patient expects to pay or whether the physician does not intend to charge for his services, the law places upon the latter the same duties, and his failure to fulfill the same renders him liable.

In a recent case the physician took with him in a confinement case a young, unmarried man, who was neither a physician nor a student. This fact was not made known to the family of the patient until afterwards. A suit for damages was brought against both the physician and the attendant, and a verdict rendered against both. Medical men can not be too careful in such cases. Clearly they have no right to humiliate their patients, as did the physician in the case stated above.

A frequent cause for damages is the failure of the physician to reduce dislocations. In many instances the difficulty grows out of the fact that the medical man has not discovered the extent of the injury sustained. More frequently, however, the extent of the injury is discovered, but a dispute arises as to whether or not the physician has accomplished the attempted relief. In such cases this question arises, what degree of skill must the physician possess, or what amount of diligence must he use in order to escape liability? To say that he must exercise the greatest degree of care or possess the highest degree of skill, would certainly be unjust to him. On the other hand, to say that he need use only that amount of skill or exercise that degree of diligence possessed by moderately-educated members of the profession, would be unjust to the public. The law attempts to strike a happy medium between these two extremes. In discussing this, the Supreme Court of Iowa, in the case of Smothers vs. Hanks, 34 Iowa, 286, takes the view adopted by the weight of authorities. In that case the court holds that the physician, to escape liability, must possess that amount of skill and use that degree of care which the profession, as a whole, exercises. In determining the skill of the physician, due regard must be had for

the school of medicine to which he belongs. He must be measured by the standard of his own school, and not by any other.

The physician should also remember that, having undertaken to treat a case, he is in duty bound to continue so to do, and should he improperly discontinue his services he would be liable for any damage which the patient might suffer. By this I do not mean that the physician must continue to treat every case which he undertakes, but should he desire to quit the case he must give the patient reasonable notice, and permit him to secure another physician, in order that he may have the benefit of medical services continually.

Very often the physician will desire to perform an autopsy, but it should be borne in mind that he has no right to do this without the consent of the next of kin. In the case of the husband's death, the wife should be consulted. In the case of the death of the wife, the husband's consent must be had before the autopsy can be held. If the deceased person has neither husband nor wife then the next of kin has the right to pass upon this subject. The authorities are quite clear on the proposition that the next of kin have the right to immediate possession of the body, and that it must be delivered to them in the identical state in which it was when breath left it. There is an exception to this rule, however, and that is in cases where the patient dies under suspicious circumstances. The Coroner, in such cases, has a right to hold a *post-mortem* examination to ascertain the cause of death.

In this article we have been discussing some of the various cases in which the physician might be made to answer in damages. In conclusion, let me explain the kind or measure of damages. Legal authorities generally divide the subject into three heads, viz., nominal, compensatory and exemplary damages. Nominal damages are awarded when some duty of the physician has been neglected, but no serious loss sustained. Compensatory damages mean just what the term indicates, a damage to compensate the injured party for the loss suffered. Exemplary damages go further than the real loss sustained. In most States the courts frown upon exemplary damages, and limit the injured party to nominal or compensatory redress.

Montgomery Block.

[Written for the MEDICAL BRIEF.]

An Observation on Numbers of Bacteria in School Rooms.

BY L. S. ROSS, M. SC.,

Professor of Biology Drake University; Director of the Des Moines Auxiliary State Bacteriological Laboratory.
Des Moines, Iowa.

At the request of the President of the Polk County Medical Society, in November, 1905, I made a little investigation into the bacteriological conditions of the school buildings of Des Moines.

Because of circumstances, the work was hurriedly undertaken, and because of that fact, was more crudely done than it otherwise would have been. Not having apparatus available for the determination of the number of bacteria in a measured quantity of air, and not having time to prepare such apparatus, it was necessary that the method adopted should be the rather crude one of exposing Petri dishes in the air of the school rooms for a definite period of time. It was also necessary that these dishes, while being exposed, could not be under direct observation; consequently I do not know that in all instances they were all undisturbed, although I believe such to have been the case. For these reasons, then, you will readily understand that results obtained can be considered only as approximate instead of being scientifically accurate. For a period of thirty minutes a Petri dish containing ordinary gelatine medium was exposed in each building, in the room which was most crowded with pupils. At the beginning of the exposure of the dishes in the rooms selected for the purpose, the teachers gave the pupils a marching drill, or calisthenics—with one exception, that being in the case of the room in the West Side High School, in which the request was not made—in order that the dust of the room should be put into circulation. Teachers were requested to replace the covers on the

dishes at the end of the allotted time and take them to the principal's office.

Upon the return of the gelatine dishes to the laboratory, they were placed in the incubator room and kept at room temperature for a period of forty-eight hours, with the exception of some of the dishes, which unavoidably were permitted to stand sixty hours before the count of the colonies was taken. If the dishes had been permitted to incubate longer, the probability is that a larger number of colonies would have developed. As has already been stated, the determination of number per cubic meter could not be made by the method employed. The number of colonies on the gelatine plates exposed in the different buildings is as follows:

Benton, Room 1	1,150
Bryant, Room 10	504
Curtis, Room 5	903
Bremer, Room 1	875
Emerson, Room 5	1,320
E. High Assembly Room	386
E. High Toilet, girls	478
Lucas, Room 4	784
Webster, Room 8	435
Longfellow, Basement	695
Longfellow, Room 1	415

This makes a list of buildings in East Des Moines in which dishes were exposed.

The number of colonies on the plates exposed in the different buildings in West Des Moines is as follows:

Franklin, Room 7	353
Irving, Room 5	253
Bird, Room 5	323
West High, Room 11	93
Lincoln, Room 2	460
Summit, Room 3	235
Forest	355

The incubation period in the following buildings was sixty hours instead of forty-eight.

McKinley, Room 2	325
Washington, Room 8	615
Oakland, Room 10	425
Garfield, Room 4	151
Crocker, Assembly Room	198
N. High, Troutner Room	129

Leaving Room No. 11 of the High School out of the calculation, the average number of colonies per dish exposed in the West Side buildings was 322; in the East Side buildings, 677. With these counts as a basis, I find that just after the dust of the rooms is put into circulation by the children marching, the bacteria fell to the floor at the rate of 7,403 on one square foot of floor surface in one hour of time in the West Side buildings, and at the rate of 15,570 on the same area in the same time in East Side buildings. Considerable variation in numbers is noticeable in different buildings, the smallest number in any West Side building being 129 and the largest 615. In the East Side buildings the corresponding numbers are 375 and 1,320. Of course, conditions of exposure of the dishes could not be identical in the various buildings. The location of the building affects, in considerable degree, the number of germs in the air. The fact that conditions under which the dishes were exposed could not be identical makes it evident at once that the number of colonies in the different buildings is not to be taken as an exact measure of the efficiency of the janitor service in the various buildings. Yet it does indicate with a greater or less degree of accuracy the relative condition of the rooms at the time when the exposures were made. The number of colonies developing in the dishes exposed in the East Side buildings is approximately two times the number developing on the West Side. I attribute this difference to a great extent to the fact that the floors of the West Side buildings were kept oiled with a special preparation to prevent the dust rising, while those on the East Side were not. Bacteria are heavier than air, and consequently tend to fall to the ground or floor. If the surface of the floor is such that the dust and the bacteria adhere, then movement in the room, as a natural consequence, will fail to put much of the dust into circulation. No better illustration of the sticking of dust to an adhesive surface can be given than John Tyndall's classic experiment in 1876. If the surface of the floor is moist, then the bacteria will adhere. So long as the dust and bacteria are moist they will not be taken up to any very great extent from the surface by ordinary air currents. It has been known for a number of years that the air in sewers is much more nearly pure bacteriologically than is the air in the street. It is not necessary to state that in order to keep the air in the school room as nearly free from bacteria as possible, the floor, the walls and furniture must be kept as thoroughly cleansed from dust as practicable.

1308 Twenty-Fourth Street.

[Written for the MEDICAL BRIEF.]

A Few Words on Diet in Tuberculosis.

BY W. W. BUTMAN, M. D.,

Professor of Theory and Practice of Medicine in the Denver Homeopathic Medical College. Denver, Colo.

We all know the marked effect of a well-cooked meal, carefully prepared and attractive in appearance. To the tubercular patient whose digestion is usually more or less impaired, whose appetite is poor, how much more important is a proper selection of foods. I may say almost, how imperative; for no matter what our medication may be, our best efforts in this direction will be frustrated unless the patient's diet is carefully looked after.

It is needless to say that no routine of diet can be prescribed for tuberculous patients. The patient must be given the food which is best for him, and at the same time food which he cares for. It is worse than useless to force feeding to the point of nausea. One may say that this is never done. I know otherwise, however, and have seen patients fed on a diet of milk and eggs until the appetite of the patients were entirely gone, and the digestive apparatus completely upset. No better diet could be recommended than the foods above mentioned, but if the patient does not care for milk and eggs, and they do not agree with him, nothing is gained by forcing him to eat.

I do not believe in limiting a tubercular patient to one or two or three articles of diet; no matter how excellent and nourishing these may be. It must be remembered that the patient's entire system is in need of repair, and it is absolutely necessary that he should have all the elements of repair in all forms of food. The patient must eat whatever agrees with him, and if this particular diet is that best adapted to his condition, he is fortunate. It is very easy for the physician to recommend a certain amount of nitrogenous food; a certain amount of albuminous, etc., etc., but he should also be sure that the patient is able to secure a good quality of these foods, and their proper preparation. But a small proportion of tubercular patients live in hospitals or institutions where the sick diet question is understood and properly carried out. Foods that would be most attractive and palatable, and easily digested when prepared by those skillful in such work, may become exactly the opposite under other circumstances. It is wise, therefore, for the physician before prescribing such diet to investigate sufficiently the patient's mode of life, to know whether his orders can be carried out. To the patient living in a boarding house, for instance, or a farm house, how utterly impossible it is for him to secure such a common article of sick diet as beef tea. Properly made of the finest quality of beef it is one of the greatest aids in the diet of the sick. Made, as it is too often, of an inferior quality of meat, greasy, thick and unpleasantly suggestive of beef stew, it were much better omitted from the patient's dietary. This applies to many articles of food; unless they are properly prepared they had much better be omitted, and the wise physician will prescribe those foods which the patient can hope to have prepared in a fairly palatable form.

The diet, too, must be governed by the occupation of the patient. This latter governs also the time of eating. As a general rule it is better for the patient's system to eat more than three times a day, and a smaller quantity than the regular meal taken in health. If the patient's digestion is weak, feedings must be small in quantity and of greater frequency.

I do not believe in the use of alcoholic liquors to any degree in tubercular cases; believing that pure, unfermented grape juice is much more palatable, digestible and appetizing.

809 Fourteenth Street.

Inclosed is a one dollar "William," for which you may send the BRIEF to my address. The greatest objection that I have to it is that each issue contains so many practical and useful points. I have not the time to read them all.—T. B. GULLEFER, M. D., Greensburg, Ind.

[Written for the MEDICAL BRIEF.]

Some Experiences with the Different Methods of Treatment of Pneumonia.

BY A. W. RILEY, A. M., M. D.,

Professor of Principles and Practice of Medicine and Clinical Medicine in the Creighton Medical College; Physician to St. Joseph's Hospital, etc.
Omaha, Neb.

In almost all of my pneumonia cases I have used the salicylates, combined with expectorants, for the last five or six years. And at the present time I prefer this method of treatment in the very young and very aged cases. But in those patients varying from fifteen to seventy-five years of age I now use the quinine treatment with most satisfactory results. I have the deepest confidence in the latter method of treatment, and although I have used it in only fifteen cases as yet, every case, regardless of age, has recovered from the pneumonia itself; one patient only succumbing to complications after the pneumonia proper was cured. My method of treatment does not differ greatly from that laid down by Galbraith, and was first used by me after meeting Dr. Galbraith and hearing reports of other medical men who had visited his hospital and watched his patients from day to day.

Treatment is begun as soon as diagnosis is made, beginning with one drachm of quinine. In one hour the patient receives one-half drachm, then, in two hours, twenty grains, and after that ordinarily but six grains every three hours. Following this treatment, temperature usually disappears in twenty-four hours. If, after two or three days, however, there should be a noticeable rise of temperature, one-half drachm of the quinine is administered instead of the six-grain dose, the six grains continued as before. After the first day the temperature usually returns to normal, and the necessity for the larger dosage seldom arises.

The question may be asked: How is it possible to give such a large dose of quinine, or, rather, how to get the patient to take it without complaint? My method is to rub the quinine up with syr. yerba santa and glycyrrhiza, making a paste, adding a little water to hold it in suspension. In this form the patient usually makes no objection; and, in fact, rarely speaks of the bitter taste. If one dose is rejected, it can be repeated, and he rarely rejects the second.

In cases complicated by pleurisy, contrary to the usual custom, I make it a practice to give sulphate of morphia to relieve pain, and expectorants when necessary to secure relief from annoying cough. I believe when pain is present, or any symptom which interferes with the rest and comfort of the patient, it should be relieved, when possible.

Under the quinine treatment I have not found the usual heart stimulants necessary; the drug itself apparently acting as a stimulant. It seems to have a tonic effect on the heart, and its influence upon peripheral circulation is decidedly marked. The patients are invariably ruddy in color, and there is every evidence that the blood is driven to the surface of the body, thereby relieving the congestion of the internal organs.

Another merit of this method of treatment is that it does not interfere with the nourishment of the patient. I have been in the habit of giving some preparation of meat juice, alternately with milk, every three hours, but after the temperature goes down to normal the patient will require more nourishment, and can be given something else.

Objection has been made by those who do not favor this treatment that it is followed by violent delirium. In reply to this I can only say that I have seen violent delirum in many pneumonia patients treated by the salicylate and other methods, and I am convinced that quinine is a most valuable remedy in almost all cases of pneumonia. And right here I wish to speak of this treatment in a recent hospital case. A young man who had been operated upon for appendicitis developed pneumonia in forty-eight hours; becoming delirious, he escaped from the nurse, leaped from the window, and was found and returned to the hospital some hours later. He was put on the quinine treatment, and the following day, while his right lung was completely consolidated, he appeared well and ready to take

nourishment, and remained in that condition until the lung was entirely cleared up. Every physical sign of pneumonia was present in this case prior to the dosage of quinine.

In my private cases I always discuss this method of treatment with the patient or his family, and am governed by his or their preference; assurance, however, being given that I have seen no bad results following the quinine dosage.

A medical authority stated some time ago that "pneumonia was the old man's friend," since it appeared usually at a time when he had outlived his usefulness, and it was pretty sure to carry him away. Although we were formerly taught to expect a fatal outcome in aged patients suffering from pneumonia, I would like to mention a recovery in a patient eighty-seven years of age. And two more recent recoveries in patients seventy-four and seventy-eight years, respectively. In the first-mentioned case the salicylate method of treatment was used. The quinine method has been used, and has given me good results in patients ranging in age from fifteen to seventy-five years.

Brown Block.

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The Diagnosis and Treatment of Iritis.

BY H. H. LEAVITT, A. M., M. D.,

Professor of Ophthalmology in the College of Homeopathic Medicine and Surgery of the University of Minnesota.
Minneapolis, Minn.

One of the common diseases of the eye, one fraught with great danger to the usefulness of the eye as a visual organ, is usually seen first, diagnosed and treated by the general practitioner. It too often happens that the case is referred to a specialist only after alarming complications have intervened. Such is the role of iritis in the great majority of cases. It is important, therefore, that the general practitioner should be familiar with the important features of this disease.

The iris is a curtain which hangs in front of the lens, and is attached at its circumference to the ciliary processes a little in front of the corneo-scleral juncture; it is pushed slightly forward towards its center by the lens; the central portion is lacking, however, thus forming a pupil; posteriorly it is covered by the pigment layer of the retina; it is well supplied with blood vessels, most of which run in a radial direction. These branch from an artery lying around the outer margin of the iris which is called the large circular artery of the iris. Near the margin of the pupil there is another artery, also circular, which is called the small circular artery of the iris. The large circular artery is supplied with blood from the long ciliary arteries which anastomose with the ciliary arteries from the blood vessels in the conjunctiva. Around the inner margin of the pupil is a muscle about a millimeter in width; the sphincter pupillæ. This muscle is supplied with a branch from the third nerve.

The symptoms of inflammation of the iris are very characteristic. The subjective symptoms are pain, photophobia and impaired vision. The pain is of a peculiar character, neuralgic in type, and is frequently so severe as to make sleep impossible. The objective symptoms are change in the color of the iris, being generally darker, owing to the congested condition of the blood vessels with which the iris is so plentifully supplied. The pupil is somewhat smaller than the pupil of the other eye, as a rule, and the aqueous humor is apt to be cloudy, so that the pupil loses its blackness. If an effort is made to dilate the pupil more or less adhesions will be seen, so that the pupil will dilate irregularly. These adhesions are known as synechiæ. In severe cases there is a deposit of pus in the lower part of the anterior chamber which is known as hypopyon. Frequently it is tinged with blood—a condition designated as hyphemia.

If the vision is tested at this time it will be found to be very much below the normal. The condition of the ciliary vessels at the margin of the iris is also of value in making a diagnosis from conjunctivitis, the congestion diminishing as the distance increases from the ciliary margin. In conjunctivitis the blood vessels are more easily made out; the redness is apt to increase rather than diminish at a distance from the ciliary margin.

About fifty per cent of the cases of iritis are due to syphilis, rheumatism,

gonorrheal rheumatism, and other infectious diseases; traumatism making up a goodly number. The disease, if left to itself, is apt to run a course of three or four months and leave the eye much worse than before the attack. It is a disease that is very prone to recur. In the milder cases the most common sequelæ are synechiæ, which leave the iris attached to the anterior capsule of the lens at one or more points, and if the disease recurs we have additional points of attachment so that frequently the iris is attached to the lens all the way round the pupil, the anterior and posterior chambers are thus cut off from each other, and the excretion of the eye is thus interfered with. The tension of the eye is apt to be increased, and an attack of glaucoma supervene. Little spots are found deposited on the posterior portion of the cornea, and are apt to remain permanently, very materially interfering with the vision. It is common for an eye that is well on the road towards recovery to relapse and have a second attack of iritis; or, frequently the disease will attack the other eye. This tendency is readily understood when we consider the etiology.

Diagnosis. — The most characteristic points are the severe pain, the discoloration of the iris, the contracted pupil; turbid aqueous; the characteristic ciliary injection and the presence of synechiæ. The principal diseases with which it may be confused are glaucoma and conjunctivitis. In glaucoma there will be an increase of tension, usually a dilated pupil; the iris will be its normal color, and will dilate symmetrically upon the use of a few drops of cocaine. In glaucoma the pain is fully as severe, but less neuralgic in character; more of a grinding or boring pain. In conjunctivitis the pain is not so severe; seldom interferes with sleep; the secretion is more profuse and mucoid or mucopurulent in character.

The treatment should have reference to the causal indications. In the case of syphilis the remedy chosen should be one that will act quickly, and mercury still stands without a rival. It should be used preferably by inunction. If this is inexpedient, mercurial baths and internal medication should be substituted. Locally, atropin in a one per cent solution should be instilled into the eye every three hours, until dilatation is accomplished. If there are adhesions, it may be necessary to use atropin, pure, in the conjunctival sac, taking pains to compress the lachrymal sac while the salt is being dissolved to prevent its being carried into the nose, as it frequently causes systemic poisoning. As soon as dilatation is complete the use of atropin can be gradually diminished, once or twice daily being sufficient to maintain dilatation. In addition to this, the eye should be bathed fifteen minutes out of every hour with very hot water in which boracic acid or biborate of soda has been dissolved. The eye should then be covered with dry absorbent cotton to keep it warm, which aids very much in relieving the pain. If these means are not sufficient to dilate the pupil it is well to apply a couple of leeches well back on the temple, and it is a common occurrence to see a pupil that has long resisted other means begin at once to dilate. The treatment along these lines should be kept up until all pain and redness have disappeared from the eye, and the danger of a relapse has passed. When the disease is due to syphilis, it is advisable to follow up this treatment with the iodide of potash for several months so that future attacks in the same or in the other eye may be prevented. The patient should be cautioned not to use the eye too severely for some time after an attack, as the eye is a long time in regaining its normal strength.

810 Pillsbury Building.

[Written for the MEDICAL BRIEF.]

Endometritis.

BY CHARLES J. DRUECK, M. D.,
Attending Surgeon to Lakeside Hospital, Rectal Surgeon to People's Hospital.
Chicago, Ill.

Endometritis, literally speaking, signifies inflammation of the lining membrane of the body of the uterus. Clinically, however, we seldom, if ever, find the pathology so limited; usually the trouble extends into the rest of the organ. That this is but the natural result is evident when we remember that the same nerves, blood ves-

sels and lymphatics serve all of the different structures, and all are alike subject to the various nervous and vasomotor changes. Infectious products picked up within the uterus are carried through the muscular body of the uterus to the minute network of lymphatics on the serosa, and then through the broad ligament.

Endometritis occurs in three classical forms. (1) Simple or hypertrophic, (2) puerperal or septic endometritis, and (3) tubercular endometritis. Each variety has its own history, symptoms and treatment so different from the others that each requires separate consideration. This paper has to do with the simple form, leaving the puerperal and tubercular infections for future consideration.

Inflammation of the endometrium is usually the reaction of the tissues to microbic invasion, but not necessarily so. Traumatism, suppressed menstruation, retained secretions, malposition of the uterus, morbid growths in or about the uterus and excessive venery and masturbation are all exciting causes, but such cases are rare. These same conditions are sometimes only predisposing factors, but when they are the sole etiology of the endometritis the symptoms are always subacute and mild in character, and never aggravated or severe, as occurs at times in microbic infections.

Normally, the cavity of the uterus is absolutely sterile, and the constant flow of mucus and lymph from the glands, although imperceptible in amount, is sufficient to prevent any of the micro-organisms usually found in the vagina from entering the uterus. Infection is, therefore, always mechanically introduced into the uterus through the use of unclean instruments, or manipulations, in the course of treatment, miscarriage, labor or the puerperium, or by the gonococci, which latter can develop, despite the lactic acid bacillus of Doederlein, which bacillus is normally found in the vagina.

The germs most frequently found invading the uterus are the gonococcus, streptococcus and staphylococcus. Others are ocasionally found, but they are of lesser importance.

Gonorrheal endometritis, sometimes called specific endometritis, is the most frequent form, and unless mixed with other germs, is subacute in character. It frequently spreads along the membrane to the fallopian tube, causing dire distress, but is rarely taken up by the lymphatics and carried into the general system. The gonococci are often aided by other germs (most frequently the staphylococci), and such combined infection is very virulent. In these instances, not only the toxins, but the micro-organisms themselves, may be taken up.

Endometritis due to infection by the streptococcus and staphylococcus (sometimes called septic endometritis), is a virulent infection, particularly that due to streptococci, and usually follows a miscarriage or confinement. This form of infection may occur in any degree. It is sometimes most virulent as well as far-reaching in its complications and sequelæ. The streptococci permeate all structures, the lymphatics, body of the uterus, ligaments, tubes and ovaries, and then out into the cellular tissue, causing cellulitis, and finally out into the peritoneum, producing peritonitis. In the worst cases even entering the general circulation, causing septicemia. In this septic form the mucosa sloughs off, or occasionally is covered with a diphtheroid deposit. This destruction usually occurs in patches, but may be diffuse, and large pieces of mucosa, or even the muscle wall of the uterus, is cast off.

Simple endometritis presents many variations in character and course, according as the parenchymatous or interstitial structures are involved. Where the glandular structures are chiefly affected, they tend to fill the cavity of the uterus and block up the cervical canal. The secretion is abundant, and is retained until decomposed, and the odor very offensive and suggestive of malignancy. This condition is sometimes called benign adenoma. In other cases both the glandular and interstitial tissues are hypertrophied, and a fungoid condition develops.

Each of these conditions is but a different form of the same disease, *i. e.*, hypertrophic endometritis, and in the later stages, when the endometrium is thin and the elements obliterated, it is called atrophic endometritis. This is the condition found in hyperinvolution following pregnancy, in old age, and in the late stages of

chronic localized inflammation. In the late (atrophic) stage, the discharge may be abundant, but it contains few lymphoid elements, hemorrhage is scant, and the blood tends to coagulate because of the lack of lymph. Dysmenorrhea and supersensitiveness of the uterine canal occur. In the aged the endometrium is sometimes entirely missing and the muscle atrophied. The discharge is thin and purulent; sometimes bloody and erodes the vaginal and vulvar surfaces. These different stages are never sharply defined, and every patient presents symptoms of several stages. Therefore a classification based upon the clinical picture as catarrhal, hemorrhagic or senile is ambiguous and confusing, and should be abandoned.

The symptoms of endometritis are pain, increased secretion, menorrhagia or metrorrhagia, fever and reflex nervous manifestations of various kinds. In a mild case, with the disturbance limited largely to the endometrium, these symptoms are mild or indefinite, and a diagnosis may be doubtful. Likewise, if uterine, tubal or ovarian disease complicate, the symptoms may be so masked as to render only an obscure picture.

The pain of endometritis is a constant, dull ache in either the uterus or the region of the lumbar plexus; sometimes radiating through the pelvis and thighs. When obstruction of the cervical canal exists, or there is flexion of the neck, the pain is spasmodic, and if the peritoneum is involved the pain is lancinating. As these same nerves are affected in all pelvic disturbances, this same character of pain is complained of in each and every affection, and is not pathognomonic of endometritis.

The secretions are increased in quantity; thin, and either purulent or bloody. It decomposes so quickly, and has such a decayed flesh odor that an erroneous diagnosis of malignant disease is sometimes made. These discharges destroy the spermatozoa, and the women are usually sterile, or, if conception occurs, the endometrium furnishes but poor support to the ovum, and abortion usually occurs early.

Menstruation is promptly affected. It is frequently suppressed for a time, and in septic endometritis may not reappear. The suppression of lochia or menstruation always betokens serious infection. Menorrhagia and metrorrhagia usually supervene. In chronic endometritis the menstruation is more profuse, and the period protracted. Frequently it amounts to a menorrhagia. There is also sometimes a hemorrhage between the usual menstruation.

Fever is slight, except in the acute cases, when it may be high (104° to 105° F.), and is accompanied by frequent chills.

Among the reflex phenomena are vortex or occipital headache, irritation of the bladder and rectum, nausea and attacks of hysteria, melancholia or neurasthenia. The patient soon becomes anemic and weak. All of these symptoms are aggravated by conditions that determine a venous congestion to the parts; such as long standing or long walks; constipation and the menstrual periods. All of the subjective symptoms seem out of proportion to the local pathological findings.

Examination.—Examination shows the cervix edematous, and frequently eroded and granular. The uterus is large, boggy and tender. A thick glue-like discharge escapes from the os, but if this is wiped away the characteristic thin, bloody or purulent discharge from the uterus will be seen. The cervical canal is partly open. Depending upon which part of the organ is involved, the cervix may not be appreciably affected, or the uterus may be hard, of normal size and not tender. In the late (atrophic) stage of the hypertrophic endometritis the uterus may be diminished in size and the discharge clear.

Examination with the uterine sound determines a patulous cervix, and a very sensitive corporeal endometrium. Such an examination is very painful, and is followed by bleeding, because of the fragile blood vessels.

Diagnosis.—The distinguishing signs and symptoms of endometritis are dull pelvic ache, enlarged, tender uterus, open cervical canal, thin purulent or bloody discharge from the cervix and the sensitive bleeding lining of the uterus.

Microscopical examination of the scrapings of the uterus are sometimes necessary to differentiate the various forms of endometritis or to exclude other lesions. Such a curettage (exploratory curettage) can usually be accomplished without an

anesthetic, because of the patulous cervical canal.

Treatment.—In simple endometritis rest in bed, saline laxatives; a plain, absorbable diet, hot sitz baths and hot vaginal douches of plain water or normal salt solution are all that is needed. When the disease is complicated with other disturbances of the uterus or adnexa, of course, they need attention primarily.

Malpositions, flexures, deformities or stenoses of the cervical canal, or a lacerated cervix, must be remedied. Retained placenta, polypi or morbid growths within the uterus may be the exciting cause, and perpetuate the endometritis until they are removed. In the non-septic cases local treatment should be deferred until the acute stage, with pain and tenderness, has passed, unless there is some positive indication for special treatment. In the specific cases curettage is always indicated.

In the septic forms with continued fever it is necessary to douche repeatedly, and these douches should be performed under the strictest aseptic precautions. When intrauterine douches are given the return flow must be watched, because there must be unimpeded exit. Usually the cervical canal is patulous enough to allow a ready return flow, but if it is not a return flow douche must be used. Serious and even fatal accidents have occurred because of neglect of this precaution.

The germicidal property of the douche is of less importance than the flushing effect, and sterile water or normal salt solution will act very well when used every three to six hours. The stronger antiseptics may be indicated in special instances (bichloride 1 to 5,000 or carbolic acid one per cent), but they must be used less frequently, because a portion of the solution is left within the uterus, and when this is absorbed there is always the possibility of systemic poisoning.

All infections consume the patient's vitality, and in these protracted and virulent poisonings it is well to urge a simple but highly nutritious diet. Alcohol, ammonia and other stimulants are considered only as the indication arises, but iron, quinine and strychnine are useful in all cases as general tonics. Any constitutional dyscrasia should also receive attention.

When the temperature is high an ice-bag over the hypogastrium is soothing, and reduces the temperature, but it must be removed as soon as the temperature falls.

After the acute stage has passed, constitutional measures are of much importance. Absolute sexual rest, a carefully regulated diet, close attention that the bowels are loose or free; regulation of the hours of work and exercise so that the patient is not fatigued by prolonged standing or walking. Comfortable but loose-fitting clothing, plenty of fresh air and sunlight and a change of scenery.

General therapeutics are more important in chronic cases than the local treatment, although each case presents its own peculiarities.

In simple endometritis (that due to other uterine disturbances), the underlying cause will, of course, need first attention, because, while much may be accomplished by local treatment the benefit can be but temporary if the exciting cause remains. After subinvolution of the uterus, laceration of the cervix or perineum or displacement of the uterus has been remedied, the patient's recovery will be hastened by the vaginal douches, applications of iodine, ammonium-sulpho-ichthyolate and glycerin to the vaginal vault or puncture of the cervix as indicated.

When this treatment has been followed out and fails to give relief, recourse to the curette must be had. The operation of currettage will be taken up at another time. Applications to the endometrium are both useless and dangerous, and can not be considered.

599 East Forty-Sixth Street.

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Abortion—An Ethical View.

BY WM. WHELAN,

Professor of Medical Jurisprudence in the John A. Creighton Medical College.
Omaha, Neb.

It is strange that in these days of advanced science and improved methods there still lingers in the minds of some otherwise eminent in the medical profession the conviction that in extreme cases

of pregnancy they are masters of life and death.

The fact that it is the commonly accepted theory that, when conception takes place, there is life, precludes any excuse for destroying the fetus' life in the early stages of gestation. But whence have these practitioners obtained the right they boldly claim to possess? Surely they have not received it from the author of life—God. God says: "Thou shalt not kill." Nor has the State given them the right, because the State herself can not take away an innocent life. We all admit that the State may lawfully wield the sword in a just war, and may inflict the death penalty on those guilty of great crimes, but she is never allowed to sacrifice an innocent life for any purpose whatever. If the State has not the right to do away with an innocent life, much less has the individual. Self defense against an unjust aggressor can not be urged as an exception to this rule, which regards innocent and not unjust persons. There is, moreover, in this case of the fetus *in utero*, no question of the plea of unjust aggression, for if there be any aggression it is not the fetus that is the aggressor towards the mother, but rather the mother towards the fetus. The fetus has done nothing to constitute itself a menace to the mother's life, hence there can be no question of an unjust attack.. Furthermore, does not the obstacle to delivery lie with the mother? If, then, through an act of the mother's will, the fetus has, without its co-operation, been placed in the mother's womb or lodged outside of the womb, as is the case in ectopic gestation, can the child or fetus be called an unjust aggressor, or an aggressor at all?

Besides this plea of unjust aggression, those who claim they have the right to dispose of the life of the fetus tell us that the value of the fetus' life is nothing in comparison with that of the mother, that the fetus is doomed to die, and at all events it is better to save one life than allow two to perish. Such an argument comes from the heart, and not from the head. We are dealing with principle, not sentiment. If the physician acts through sentiment, and not from principle; if he so justifies his conduct, what will be the result if he carries such a principle to its logical conclusion? The asylums for the hopelessly insane and the houses for incurables scattered broadcast throughout the land, and giving evidence of our care and regard for these afflicted of humanity should, in the logic of such practitioners, be done away with, because the inmates are doomed, and their lives are worthless; rather, there would be no need for such retreats because there would be none to occupy them. But the defenders of the right to dispose of the doomed will say that such a right is restricted to the child *in utero*. Is there any material difference between the child *in utero* and the child on its mother's lap? The right of each to live is sacred, and as inviolable as that of the mother, and whatever plea or excuse is offered by those who disregard this inalienable right to life must be considered as emanating from such as sacrifice obligation to expediency.

It would seem, then, that the physician or doctor is never allowed to procure an abortion. Before we answer this query, there is need of a distinction. An abortion that is procured directly, namely, such an abortion that is a direct killing of the fetus, or one in which the fetus is the direct object of operation, or of any other method of procedure, is never allowed. If, for example, the pregnant mother is suffering from uncontrollable vomiting, which the practitioner knows he can stop by applying an electric current to the fetus, he is certainly making the fetus the direct object of the operation, and if death ensue, he is guilty of a direct killing of the fetus. This would be a case of procuring abortion directly, and a serious violation of the natural law.

We may suppose another case. A pregnant uterus is cancerous, and we will take for granted that the removal of the uterus is a necessary condition of the mother's life. What is the physician to do? The moral view should at all times determine his position, and it is this: He does not wish to procure an abortion; on the contrary, he will try his best to prevent it. He will not directly attack the life of the fetus; he operates and removes the womb; but in the operation he does not make the fetus the direct object of attack, though he knows the fetus

in the womb removed will not long survive. This is procuring abortion indirectly, and is admitted by moralists under the following conditions:

A cause is placed that has two effects, one good, as in the case just given, the saving of the mother's life; and the other an evil effect—the indirect destruction of the fetus; the evil effect is not willed, all reasonable effort is made to avoid it; the immediate effect desired is the saving of the mother's life, and is good in itself; the good effect intended is as important as the evil effect permitted, and finally the evil effect—the indirect destruction of the fetus is not made a means to obtain the good effect—the saving of the mother's life. We may then, in extreme cases, give such medicine or perform such operations as will act on the mother's system or on her organs to save her life, and permit the sad effect, which will indirectly affect the child; but we may not injure the child directly, as this would be using a bad means to obtain a good end—the end never justifies the means. So, too, with ectopic gestation. The same principles apply to both intra-uterine and extra-uterine gestation. The arguments for one are the same as for the other. In a case of ectopic gestation, the growth may be diagnosed as a tumor. If there is no immediate danger, the duty of the physician is to wait for development. It may be a tumor; it may be a living fetus. If it proves to be a child, no operation is permissible before the period of viability. Suppose, however, that it cannot be diagnosed as a fetus, and yet it is threatening the mother's life, what is to be done? It may be removed, as was the cancerous womb in intra-uterine gestation. It follows, then, from the natural law that in an extreme case, as in the cancerous womb, the removal of which is absolutely necessary to save the mother's life, abortion may be procured indirectly, or, rather, to speak more strictly, indirect abortion may be permitted; otherwise nothing may be attempted before the fetus is viable. When the period of viability is reached, in case of need, premature labor may be induced, the Cæsarian section, the Porro operation, or laporotomy may be performed.

If the principles of the natural law were made the subject of closer study by the profession, this crime of abortion would be considerably decreased, and in consequence we would have brighter and happier homes.

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Diet in Health and Disease.

BY W. A. GEORGE, B. S., M. D.,

Professor of Dietetics and Hydrotherapeutics in the Nebraska College of Medicine; Superintendent of the Nebraska Sanitarium. College View, Neb.

The importance of proper diet cannot be over-estimated, as every function of the body depends upon proper material for building up the organs, and where improper material is used we can expect evil results.

A food is said to be any substance which repairs waste of the tissues, and produces heat and energy. That is, some foods only repair waste, while others only produce heat and energy; the perfect food must include both.

Six food elements may be mentioned: The first, not commonly called a food, is of the greatest importance; we refer to oxygen, which is the only food element that is also a chemical element. We all recognize that oxygen must be received continually, and this emphasizes the importance of proper ventilation, both in health and disease, and especially in disease where the breaking down processes are more rapid than in health.

The next food element is also usually not included among the foods. We refer to water. Water makes up from three-fourths to four-fifths of the tissues of the body, and as it is continually being given off, must be replaced by a liberal supply. Nearly all foods, even those in dry form, contain some water; but water should be taken freely, as most people do not drink enough, especially those living sedentary lives. This is a common cause of constipation. It is better not to drink at meals, but to drink freely, beginning one or two hours after eating. In cases of dilated stomach, and in some cases of poor digestion, the food taken should be dry, as water dilutes the gastric juice, as

well as the saliva, and thus prevents the proper action of these juices.

Of the remaining four food elements albumen may be said to be the most important. It is a perfect food, because it will both build up the tissues and produce heat and energy. All of our foods should contain enough of this element, and yet recent experiments have shown that much less albumen is required than was supposed by students of physiology a few years ago.

Next in importance are the carbo-hydrates, including the various kinds of sugar, starch, dextrine and cellulose. The sugars require no preparation for digestion, although cane sugar must be inverted in order to be assimilated properly, and is, therefore, dangerous when taken in large quantities, as the digestive juices are unable to invert large quantities of this sugar into dextrose and levulose. In fact, it is better to use the other natural sugars, such as grape sugar, found in fruits, and malt sugar, rather than to use in considerable quantity the cane sugar.

The starches are the most important elements to consider in relation to proper cooking. A large proportion of nearly all our food is starch. Nearly all grains are made up of from two-thirds to three-fourths starch. When raw, starch is practically indigestible. In order to have the most perfect digestion starch should be mixed thoroughly with saliva, and the principal part of the digestion performed in the mouth.

Patients should be instructed to masticate their food very thoroughly, and this alone will often improve the digestion of the dyspeptic so that he will begin to improve at once. But if the starch is not thoroughly cooked the saliva will have little effect upon it, and it will be useless to tell the patient to masticate thoroughly. It is much better to have starchy foods in a form that will encourage thorough mastication. The best way to prepare this class of foods is by thorough baking, either in the form of crackers or some form of flake food. Zwieback is a very simple form of dextrinized food which can be prepared in any home. All that is necessary is to take an ordinary loaf of bread, cut into the usual slices and bake in an oven at a moderate temperature until they are browned clear through. This can be used in making most delicious breakfast toast by simply immersing the slices of zwieback in boiling hot water, and turning over the toast some dressing, such as hot fruit juice or hot milk or cream, or the zwieback can be eaten dry, and thoroughly masticated by those who need to eat dry food. It is also very nice when broken into soups.

We have no sympathy with the idea advanced by some today who are advocating raw foods. There is some question as to whether albumen is better taken raw or cooked. If albuminous foods, however, are thoroughly cooked in a form in which they can be masticated so that the gastric juice will readily mix with the particles of albumen, digestion will probably occur just as well as where taken raw. The gluten foods are an illustration of this. Wheat flour is mixed with water and washed rapidly until all, or nearly all, of the starch is removed, leaving a sticky mass of gluten. This, when thoroughly baked, either in the form of crackers or little biscuit, is ground into a fine meal, which may be eaten with milk or made into mush, and is very easily digested. It is one of the most valuable foods for diabetics who must take only small quantities of carbo-hydrates. In this case there is always some starch remaining, but by thorough baking, as we have just mentioned, the starch is well prepared as well as the gluten.

In the list of food elements we will place fats next. There is probably no food element which varies so much in quantity in all different foods, and perhaps no other element which can vary so much without affecting the nutrition. It is quite possible, as has been shown by different experimenters, that fats can be laid up in the body from either albumen or the carbohydrates, so that it is unnecessary to use fat in order to build up adipose tissue. It has also been proven that fat itself can be stored in the body as food, and in some cases large quantities of fat may be a very valuable adjunct to the food. It is very much better, however, to use fat in the form of an emulsion. For instance, cream would be preferable to butter. The fat found in nuts would be preferable to the vegetable oil. This is also true of the

fat found in the olive. These fats, when in their natural condition, are in the form of an emulsion, and are, therefore, ready to be assimilated directly into the blood and carried to the tissues, while, if taken in the free form, they must be emulsified.

Among the vegetable foods the largest quantities of fat are found in nuts. Many of the nuts are especially valuable in cases of diabetes on account of their being free from starch, and contain large quantities of albumen and emulsified fat. Among the most valuable nuts for this purpose are the English walnut, pecan and almond. Peanuts may be prepared in such a way as to make a valuable food, as they are rich in albumen and fat. They contain some starch, however, and are more like beans or peas; they need thorough cooking in order to be digestible. The ordinary method of roasting, however, is not good, as it has a tendency to produce changes in the fat, which are injurious.

The last of the food elements in our list includes the mineral salts. It is hardly necessary to say anything in regard to these salts, as they are found in sufficient quantities in the combination of other food elements. There has been considerable discussion in regard to the necessity of common salt in our foods. It is undoubtedly true that most people do better if some common salt is added to the food. However, no one has been able to prove by scientific experiments that large quantities of salt are necessary, and some have shown that very small quantities would be better for most cases. Salt, when taken in large quantities, is undoubtedly an irritant, and may produce bad results, especially in cases of kidney trouble.

Many patients need some simple instructions in regard to the combination of their foods, as bad combinations of good foods often produce more harmful results than the poor foods commonly used. One with a weak stomach will usually do better never to combine fruits and vegetables at the same meal. When this is done fermentation is likely to follow. It is better to eat fruits and grains at one meal and vegetables and grains at another, and better still to drop the vegetables for a time, and use only fruits and grains or seeds. All kinds of ripe seeds, including legumes and nuts, and all kinds of cereals, may be taken with fruit with good results. Some are ruining their digestive organs by using large quantities of milk and sugar. It is much better to discard the cane sugar and learn to use the milk without sugar.

[Written for the MEDICAL BRIEF.]

A Few Suggestions to the General Practitioner.

BY C. W. KELLY, M. D., C. M.,

Professor of Descriptive and Surgical Anatomy in the Louisville Medical College; Dean of the Louisville Medical College.
Louisville, Ky.

Dislocations and fractures most commonly met in the upper part of the body, are those of the shoulder joint, fracture of the neck of the scapula, injury of the elbow joint, dislocation of the ulna backward, Colles' fracture, etc., etc.

Dislocation of the shoulder joint is extremely common, especially subcoracoid, and fracture of the neck of the humerus is frequently observed. Occasionally, also, we see fracture of the neck of the scapula, but very rarely of the anatomical neck. Fractures of the elbow are always serious. The displacement of the outer bone of the radius backward is common, as is also dislocation of the ulna backward, and fractures into the joint by the breaking of one of the condyles of the humerus.

The management of these conditions is not difficult. Dislocation of the shoulder is easily reduced; if subcoracoid, the arm is carried forward and backward; supinator and pronator elevation being simple.

Dislocation of the elbow joint of the lower bones backward can be reduced by bending the lower bones over the knee of the physician. Fractures near and into the elbow joint must be treated with great care to prevent deformity and immobility. I would suggest early movement of the joint after injury to promote the absorption of callus poured out into the olecranon and coronoid veins, and the doctor should be very careful in his prognosis of injuries of the elbow joint with fracture.

Colles' fracture, commonly known as the silver fork deformity, often occurs in old people, resulting from a fall on the

hand. It is a fracture of the radius above the wrist joint. It is managed by the application of a splint before and behind the radius, with a little padding between the bones, the ulna being elevated, and the hand a little bent down to overcome the contraction of the supinator longus muscle.

If these cases are properly managed there should be little or no deformity.

St. Charles Place.

[Written for the MEDICAL BRIEF.]

Some Practical Operative Suggestions in Hemorrhoidal Surgery.

BY A. LEIGHT MONROE, M. D.,

Professor of Materia Medica, Clinical Gynecology and Orificial Surgery in the Southwestern Homeopathic Medical College and Hospital; Dean of the Faculty. Louisville, Ky.

The operation most often available in ordinary hemorrhoidal cases is what is known as the "slit" operation, which, in brief, is as follows:

A short longitudinal slit is made in the distal end of the pile, care being taken not to injure its nutrient artery; through this slit the contents of the tumor can be easily curetted out by a blunt instrument. The slit can then be closed with one or two small catgut sutures. By treating one hemorrhoid at a time, in this way, the circuit of the gut is soon made. This operation is clean, simple, surgical, and almost free from any danger of future complications, as all the hemorrhage occurs at the time of operation and, therefore, under the operator's observation. The danger from blood-poisoning is almost *nil*, a matter of great importance when we consider the danger of septic infection after ligation or injection methods, and the possibility of hemorrhage following these methods when the slough separates, which hemorrhage occurs insidiously, and when the physician is not present to attend to it promptly. Preceding the slit operation the sphincter should be stretched pretty thoroughly, so as to prevent the painful contractions following such operations, but not sufficiently to paralyze its muscular power, as extreme dilatation tends to increase hemorrhage.

Where the tumors are large and there is much adventitious tissue, as in most cases of the chronic type, the clamp or cautery may be preferable. Most physicians are familiar with these operations, but as handwork is generally preferable to machine work in all the arts, so I prefer the American or the Whitehead operation, where they are available, and they nearly always are, in their simple form or various modifications; or one can do the American operation on one-half the gut, and the slit operation on the other half, in some cases. The American operation is almost a rectotomy, removing, as it does, the last inch of the rectal mucous membrane and the blood vessels underlying it. In this operation the diseased area may be exposed to view by being drawn down with four or five T forceps, and a circular incision is made at the junction of the diseased and varicose section with the healthy mucous membrane. This junction is indicated by a change in the color of the membrane from purple to pearl color. After the circular incision is made by the use of the forceps, the diseased inch may be inverted, exposing the underlying structures, consisting of connective tissue and varicose veins. These are easily snipped off with scissors, and the diseased mucous membrane amputated, and we have then exposed the lower inch of the rectum. By drawing down the mucous membrane which is still intact in the upper part of the rectum, and sewing it to the skin around the orifices, we supply a healthy membrane to the part. This is easily done, if too much mucous membrane has not been removed.

We have practically, then, a new rectum, and we have a radical operation, for it is rare that hemorrhoids ever recur after the American operation.

There are two dangers to be avoided. One is the possible injury of the sphincter; the other, that of poor coaptation, causing cicatricial tissue to form, which is such an obstruction as to cripple the action of the sphincter, causing total or partial incontinence; and, as a remote result, lawsuits, or what is equally as bad, injury to one's surgical reputation.

A practical experienced surgeon should be able to avoid these complications with care. As little of the membrane as possi-

ble should be removed, so as to avoid too great tension upon the stitches. This operation was first done by Dr. E. H. Pratt, of Chicago, and is a valuable contribution to rectal surgery. As most physicians already know, the Whitehead operation is exactly like the American, except that the incision, instead of being made above the internal sphincter, is made at the junction of the mucous membrane and skin at the lower edge of the external sphincter, and then as much of the mucous membrane as is palpably unfit to be retained is cut off before the parts are reunited.

I believe that all hemorrhoidal troubles can be cured by either the "slit," or the American operation, or a modification of them.

909 Fourth Avenue.

[Written for the MEDICAL BRIEF.]

Diseases of the Breast.

BY ALFRED DE ROULET, B. S., M. D.,

Chicago, Ill.

Formerly Professor of Surgery and Diseases of Women in the Medical Department of Trinity University.

III. CHRONIC INFLAMMATIONS.

The chronic inflammatory diseases of the breast are naturally divided into two groups (*a*) those occurring in connection with or as a result of lactation, and (*b*) those developing entirely independently of lactation as the result of some specific infection. In the first class we would place the two principal forms of chronic lactation mastitis, *i. e.*, ductal mastitis and subacute or chronic mammary abscess. In the second group we would class the specific infections as tuberculosis and syphilis. In addition to these Warren includes in his excellent classification simple retention cyst and non-malignant eczema of the nipple and areola.

Chronic lactation mastitis occurs most frequently in young matrons as a result of infection of the milk ducts. In the ductal form of lactation mastitis, indurated masses appear in the breast. They are usually accompanied by considerable pain and tenderness, and are very likely to involve the skin. The axillary glands are usually enlarged. On section, numerous small abscesses and necrotic areas are found scattered through the breast in close relation with the larger ducts. Histologically there is a marked increase of connective tissue, while the tissues surrounding the ducts are the seat of a more or less pronounced round cell infiltration.

In a chronic or subacute abscess of the breast there is found a more or less irregular swelling of variable size, which has developed rather slowly, and which has not been accompanied by any appreciable pain or tenderness. Fluctuation may be elicited in some cases, but more often can not be detected. In cases of long standing the skin is not infrequently involved, and in such cases more or less pain and tenderness is present. The axillary nodes are usually enlarged.

The prognosis in chronic lactation mastitis is entirely favorable, if proper treatment is instituted. In the ductal form excision of the affected lobes is indicated, while in the chronic abscess simple incision and drainage is often sufficient, although in some instances excision of the lobes involved is necessary.

Tuberculosis of the breast is generally considered a very rare disease, but this reputation is, I believe, misleading, and not at all in accordance with actual facts. It is true that comparatively few cases have been reported, but that proves nothing. Secondary cases are often entirely overlooked, as they are not infrequently overshadowed by the gravity of the primary condition. For example, a case of mammary tuberculosis would, in all probability, pass unnoticed in a patient with advanced pulmonary tuberculosis. The primary cases in many instances are treated by the family physician as chronic mastitis, while not a few cases are undoubtedly operated by the enterprising surgeon for carcinoma.

The disease occurs most frequently between the twentieth and fortieth years, that is, during the period of greatest functional activity of the breast. Apparently there is no connection between the disease and lactation, although the majority of cases are reported in women who have borne children. The disease is usually limited to one breast, but occasionally both may be involved. As in cancer, the upper outer quadrant is affected more fre-

quently than any other portion of the gland.

As a rule the breast is not noticeably enlarged, although more or less prominent bosses may appear on different parts of the organ. In many instances the patient's attention is attracted by the presence of a more or less constant dull, aching pain, which, in approximately one-half of all cases, accompanies beginning abscess formation. This pain is rarely severe, and in many instances is scarcely noticeable.

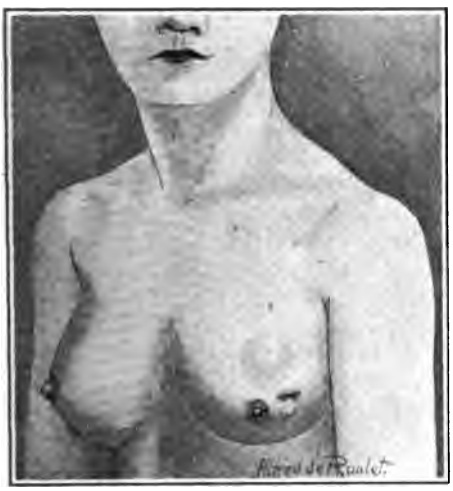


FIG. 1. Tuberculosis of Breast.

On examination a case of primary tuberculosis of the breast will show the presence in the gland of one or more, usually two or three, irregular flattened masses of variable consistence, which are inseparable from the gland tissue. They are not particularly sensitive, and vary from the size of a hazel nut to that of a hen's egg, and while the masses are more or less separated from each other, they usually lie in the same quadrant. Abscess formation occurs rather early, and the tendency to involvement of the skin is marked. Discharging sinuses are present in a large proportion of all cases. In advanced cases the nipples are often retracted, while the axillary glands are enlarged and matted together.

"Cold abscess" is not often encountered. When present it occurs as a circumscribed, elastic fluctuating tumor, with sharply defined outlines. The surrounding tissues are not infiltrated, fistulæ do not form, and the skin is not involved. The condition is likely to be mistaken for a simple retention cyst; the history of the case, however, should afford some assistance in the differentiation.

The following case histories are fairly typical:

Case 1.—Patient, aged twenty-six, rather pale and anemic, but fairly well-nourished. Two years ago she noticed a rather painful lump about the size of a walnut in the right breast. Attributing the condition to a bruise, she paid no particular attention to it. The mass gradually increased in size, and two smaller masses appeared. The skin over the first nodule had recently broken down, and a discharging sinus appeared. Of the two smaller masses, one was firm and not adherent to the skin; the other was somewhat softer, and especially in the central portion, and dimpling followed any attempt to pinch up the overlying skin. The axillary glands were enlarged. The patient recovered promptly after the complete removal of the breast and axillary lymphatics, and six months later has shown no evidence of a recurrence. On section of the breast several small caseous nodes were found in the upper outer quadrant, while caseous masses were found in two or three of the removed lymph glands. (Fig. 1.)

FIG. 2. Tuberculosis of the Breast.

Case 2.—Patient forty years old; mother of eight children. About two years ago she noticed a slight swelling in the right side of her neck, which increased slowly for about three months, since when there has been little or no change. A year ago she began having more or less severe aching pain in the right breast. On examination several hard, flattened nodules, varying from the size of a pigeon egg to that of an English walnut, were detected. These masses were hard and non-fluctuating, with vaguely defined outlines; they were firmly attached to the glandular tissue, and could only be moved with the breast. The axillary and cervical glands were enlarged, but the nipple was not retracted. (Fig. 2.)

As to the prognosis in any given case of tuberculosis of the breast, if the condition develops primarily in the breast, the complete removal of the tuberculous tissue may be expected to give very satisfactory results, but should the condition develop secondarily to a pulmonary tuberculosis very little can be expected. In the primary cases it may be necessary in some instances to remove the entire breast, together with the enlarged lymphatics, while in less extensive cases, excision of the affected lobes is sufficient.

In *syphilis of the breast* the lesion may appear as an initial sclerosis of the nipple and areola, or more commonly as a gumma, or a diffuse infiltration of the gland.

The mammilary chancre occurs as a typical chancrous erosion, or as an indurated ulcer or fissure. It is usually single, but in a few cases multiple lesions are observed. The chancre may be located on the nipple or the areola, and, as a rule, is depressed rather than elevated. (Fig. 3.) Ulceration is frequently present. The borders of the induration are not clearly defined. The lymphatics leading to the axilla are enlarged and indurated. Pain is often present, and when the nipple is involved is likely to be severe.

The gumma occurs as a more or less circumscribed tumor which may develop in any portion of the breast. In its developing stage it is hard; free from pain or tenderness, and moderately projecting. The overlying skin is freely movable, and the nipple is not retracted. Later, the gumma softens, and the skin becomes adherent, discolored and infiltrated, and breaks down, forming an excavated ulcer. (Fig. 4.) This condition is very often confused with carcinoma, but the presence of syphilitic lesions in other parts of the body, as well as the rapid improvement which follows the administration of the iodides is sufficient to establish the diagnosis.

The infiltrating form presents a diffuse, ill-defined, painless induration, which may involve the entire breast or which may be limited to one or more lobes. The skin is unaffected in the early stages, the nipple is not retracted, and the axillary glands may or may not be enlarged. As with gummata, softening and ulceration may be expected.

Simple retention cyst appears as an isolated, rounded, elastic tumor, with clearly defined outlines, which develops rapidly and with little or no pain or tenderness. The size of the cyst is variable, but ordinarily ranges from the size of a filbert to that of a goose egg. The tumor is freely movable, does not infiltrate surrounding tissues, and is not accompanied by changes in the overlying skin, as adhesions, discolorations or dimpling. The nipple is not retracted, and the axillary glands are not affected. It may appear at any time between puberty and the menopause, but is most frequently encountered in young and prolific married women.

The cyst is purely local in character, and is due to the accidental obstruction or occlusion of a milk duct. This occlusion may be due to trauma, scar following operation, to prolonged suppuration, or to more or less transient inflammations involving either the nipple or the gland. In many cases, however, the exciting cause can not be determined.

On section the cyst is found to be thin-walled and filled with a more or less turbid fluid, which varies from a pale yellow to a yellowish brown or red. The clinical picture is very clearly shown in the following case:

Patient, well-nourished young woman, twenty-four years old; unmarried. Two months ago noticed ovoid lump about the size of a small walnut immediately below the left nipple. The discovery was made

by accident, as there had been no pain or tenderness to attract her attention. There was no history of previous injury or disease. On examination the tumor was found to be smooth, elastic and freely movable. No fluctuation. The overlying

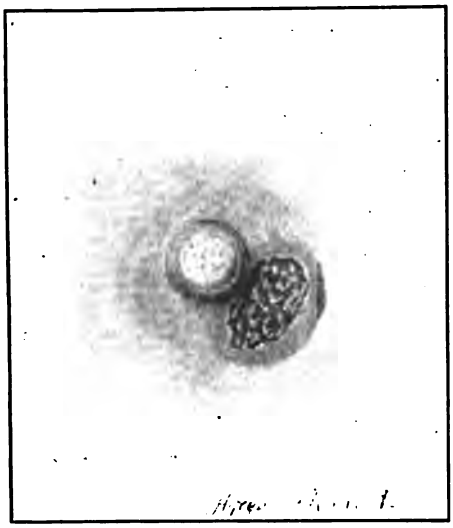


FIG. 3. Chancre of Nipple and Areola.

skin, the nipple and the axillary glands were perfectly normal, as was the opposite breast. A diagnosis of simple retention cyst was made, and, on operation, a thin-walled cyst, containing approximately an ounce and a half of pale, somewhat opalescent fluid, was dissected out.

A rather uncommon variety of retention cyst, the galactocele, or milk cyst, occurs during lactation as the result of the blocking of a milk duct. The cyst at first contains pure milk, but eventually the watery portion may be more or less completely absorbed, leaving behind a soft, putty-like mass. Certain authors assert that calcification of this mass may occur, but this assertion I believe to be entirely unsupported, as I have never been able to find even a single case reported where such calcification has occurred.

During its entire course a galactocele is free from pain and tenderness. The skin is not discolored, and the nipple remains unchanged. The axillary glands are not involved, and the general health is not affected. A soft, painless, fluctuating, more or less globular tumor, appearing suddenly during lactation, with no signs of inflammation, may be safely diagnosed a galactocele. With a cyst of long standing, the swelling increases with each successive pregnancy and decreases somewhat with the cessation of lactation.

Simple retention cysts are of comparatively slight pathological significance, and are not infrequently mistaken for periductal fibromata. In middle-aged women there may be some difficulty in differentiating them from senile parenchymatous hypertrophy.

Eczema of the nipple and areola occurs most frequently in women under forty years of age, especially during pregnancy and lactation. In the beginning the nipple becomes red, swollen and painful. Crusts and fissures soon form, and the affection may spread over the breast as a more or less circular patch. As a result of the swelling of the surrounding tissues, the nipple appears decidedly flattened. Pain and itching are constant symptoms. After the menopause a condition somewhat resembling eczema may develop. This affection, Paget's disease, presents a "florid, intensely red, raw surface; very finely granular, as if the whole thickness

FIG. 4. Ulcerating Gumma of Breast.

of the epidermis had been removed." There is a profuse, clear yellow exudation. The edge of the patch is often somewhat raised, and is sharply defined from the

surrounding tissues. The contour is circinate, and composed of more or less regular arcs of a circle. As the disease advances, irregular patches of epidermis are seen scattered over the excoriated surfaces, the patches appear dry and glazed, and are said to be characteristic of the disease. Even in the early stages there is considerable superficial induration, the indurated area being approximately an eighth of an inch thick, and "feels like a penny through a piece of cloth." In eczema there is no induration, the tissues are soft and the edges of the eczematous patch are not sharply defined. Itching is an early symptom in eczema, and a late symptom in Paget's disease. In eczema there is less rawness and more of a punctiform redness, while the papules, vesicles and pustules, as well as the occasional exacerbations which characterize, are not seen with Paget's disease. In either condition, lymphatic involvement does not occur until late in the disease.

The prognosis is favorable in eczema, or while the condition may not yield readily to treatment, it is entirely curable. Paget's disease, on the contrary, resists all treatment other than operative, and in the course of from one to five years after its first appearance inevitably terminates in cancer.

1013 Venetian Building.

[Written for the MEDICAL BRIEF.]

Repair of the Pelvic Floor or Colpoperi Neorrhapy and the Structures Involved.

BY BYRON ROBINSON, B. S., M. D.,
Chicago, Ill.

(Continued from page 367.)

The pelvic connective tissue comprises the connective tissue between the pelvic fascia and the pelvic peritoneum. It serves to connect and maintain the relation of the pelvic organs as a bed on which the viscera rest, to safely distribute nerves and vascular channels, as a buffer to avoid traumatism, and as an elastic compressible medium. It frequently consists of fine, shiny planes, and hence allows invading infection to cleave them asunder and progress in various directions. However, the connective tissue of the pelvis may be areolar, fine and delicate, as white as snow, and as soft as eiderdown, reminding one of hoar frost. It may gradually glide from the softest cellular wide-meshed, spongy form, to the firm, fibrous, hard lamina or fascia lining the pelvis, the loose connective tissue pads, the interstices between muscles and organs and about vessels and nerves. It also fills irregular spaces. It is distributed quite irregularly. It allows organs to move, to expand and contract, and to return to their normal spongy base without losing their integrity or adjacent relation. A large mass of connective tissue exists, having a triangular outline, between the bladder and posterior pubic surface, known as retropubic fat. This part varies in position and shape from pressure by attitudes of the state of the body and distention of adjacent viscera. A certain amount of tissue is collected between the cervix, vagina and bladder, in which is distributed a large venous plexus, and through which the ureter traverses. Large collections of connective tissue are located along the lateral surface of the uterus, especially about the cervix. It also extends well laterally between the blades of the broad ligament, especially extensive along the base which is traversed by large plexuses of valveless spiral veins. It is when these veins, set in well-fitting connective tissue sheath, become straight, irregularly dilated and torn from their connective tissue bed that the woman becomes ill. Her pelvis is excessively congested, and excessively filled with residual venous blood.

The connective tissue, chiefly with some muscular fibers, covered by a dorsal and ventral peritoneal blade, constitute the broad ligament. However, each vessel and nerve carries its own connective tissue into the broad ligament. Between the rectum and vagina there is also a collection of areolar tissue, enabling the canals to glide on each other without damage, and some exist between the rectum and sacrum. The pelvic connective tissue located between the pelvic peritoneum and pelvic fascia is all more or less connective. It is like connective tissue elsewhere, and subject to similar disease. Great importance is attached to the distribution of the pelvic cellular tissue

from the clinical fact that the abscesses arising in it progress in certain directions, and experimentation has defined the routes. This tissue is involved in parametritis and perimetritis, and in pelvic phlegmon. An abscess originating at the side of the cervix generally moves along the pelvic floor at the base of the broad ligament. It then progresses along the region of the round ligament into the iliac fossa. The abscess of the pelvic cellular tissue will progress in the direction of the least resistance, cleaving the fine fascial planes. It may rupture over the iliac crest, over Poupart's ligament, into the rectum, bladder, vagina, and through the perineal body, or, rarely, into the peritoneal cavity. The pelvic connective tissue may become infected from the ischio-rectal fossa, and *vice versa*, by the infected lymphatic sheaths which follow all vessels and nerves entering or leaving either pelvic or ischio-rectal space.

A phlegmon in the pelvic tissue generally arises from an abortion or labor, acute infection. The author performed sixty autopsies on females for the special object of studying the relation of pelvic peritonitis to the pelvic subperitoneal connective tissue. Ten per cent of the subjects having pelvic peritonitis had pelvic cellulitis, which, in every case, was subsequent to or a continuation of the superimposed pelvic peritonitis.

Ninety per cent of pelvic peritonitis existed without the least sign of pelvic cellulitis, the subperitoneal connective tissue being as white as snow. The masses felt in the pelvis through the vaginal fornix are nearly always peritoneal exudates perchance, encasing the ovary and oviduct.

The pelvic subperitoneal connective tissue, the subserosum, is padding material protecting beds, a connection of organs and conductor of vessels and nerves. The nomenclature of the local portions of the pelvic connective tissue are parametrium, paracolpium, paracystium and paraproctium. The above names indicate sheaths of connective tissue enveloping the respective organ. The pelvic connective tissue might be localized in three regions, viz.: (*a*) The loose connective tissue lying in the portion of the pelvis anterior to the broad ligament extending especially anteriorly toward the inguinal canal. Poupart's ligament, round ligament, the cave of Retzius, the subserosum of the ventral abdominal wall, dorsal surface of the bladder, and the utero-vesical pouch.

(*b*) Loose connective tissue lying in the portion of the pelvis dorsal to the broad ligament, and extending especially dorsally and laterally as paraproctal and parasigmoidal tissue.

(*c*) Loose connective tissue lying at the external lateral border of the base of the broad ligament extending especially toward the iliac fossæ and the mesocola, and proximalward to the para-renal tissue. The pelvic connective tissue could be localized by the designation para-vesical, para-uterine and para-rectal. It might be designated as the vesical and rectal mesodermic beds of the pelvis. Forced injection of traceable fluids into the pelvic connective tissue demonstrates that the fluids follow the highways of the great masses of tissue which are the directions of least resistance. Pathologic fluids assume the same routes. The signification of the pelvic subserosum becomes evident when it is remembered that as peri-neural, peri-vascular and peri-lymphatic sheaths it accompanies these structures into the parenchyma of organs internal and external to the pelvis. It can thus convey infection to different regions.

The Pelvic Sphincters.—The pelvic sphincters are the anal, the vaginal, the uterine, the urethral, the ureteral and those of the oviduct. They are landmarks, points for anatomic, physiologic and pathologic consideration.

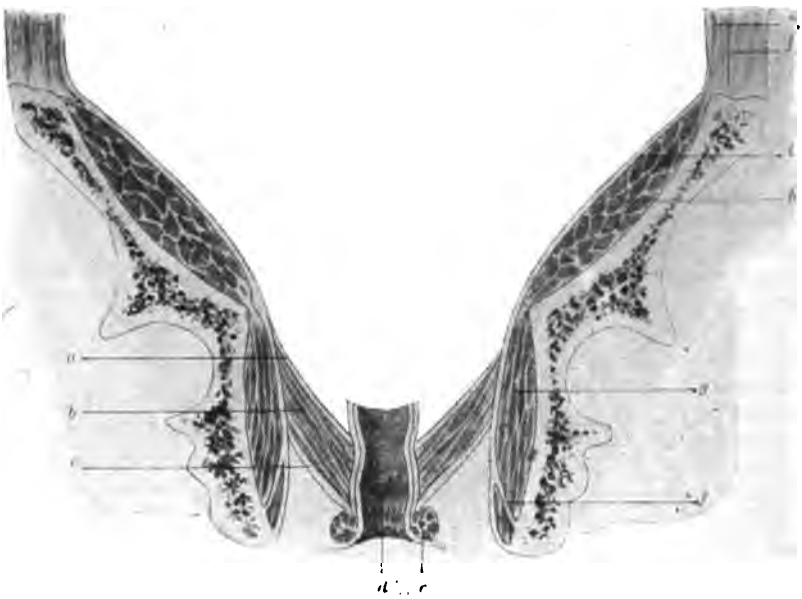
The object of a sphincter is to guard an orifice, to allow periodic retardation and passage of matter by timely contraction and dilatation. It may be located in a tube wholly in relation to the mucosa or partially in relation with mucosa and integument. Sphincters, or ring muscles, are subject to frequent congestions and decongestions, contractions and relaxations. They functionate periodically, and in a state of rest are closed. They possess a complicated nerve, a high blood and large lymph supply. They are liable to malignant growths, cicatricial strictures, and are occasionally the seat of severe pain from wounds of the margin.

FIXATION OF THE TRACTUS GENITALIS.

A. PELVIC DIAPHRAGM (PRIMARY SUPPORT.)

Diaphragm pelvis consist of muculus levator ani plus its proximal and distal fascia. What maintains the genital organs in their normal positions?

(*a*) The form and function of the pelvic floor (levator ani with its proximal and distal fascia). (*b*) The position of the genitals and the adjacent viscera. The mesenteries of the tractus genitalis (ligamenta lata) are not for mechanical support. They are to conduct vessels, nerves, and to maintain structures in order for function. It is true that the ligamenta sacro-uterina acts as vigorous supports if placed on tension, but in their present normal state of existence they simply direct the cervix dorsalward. The vagina extends from the pubis to the cervix, and the sacro-uterine and the ligaments extend from the sacrum (rectum) to the cervix. Hence the vagina and sacro-uterine ligaments act as a supporting beam on which the cervix and uterus is supported. The same story, that the thoracic and abdominal viscera are chiefly maintained in position by their respective walls, is true as regards the position of the pelvic viscera and its walls. The so-called uterine ligaments (mesenteries of the genitals) act only in pathologic relations, as in sacro-pubic hernia. As an anatomic demonstration that the pelvic floor supports the uterus, one can observe (with evacuated bladder and rectum and uterus in physiologic position) that the transverse vaginal slit in the pelvic floor lies two inches ventral to the cervix (*i. e.*, the corpus uteri lies dorso-ventral across the transverse vaginal slit). If pressure be exercised on the corpus uteri exactly as intra-abdominal pressure is applied, the previous position of the uterus will not be endangered, *i. e.*, it will not enter the vaginal slit, but simply force the pelvic floor distalward. In other words, the pelvic floor, the distal wall of the pelvis or levator ani, with its proximal and distal fascia, maintains the tractus genitalis (uterus) in the normal physiologic position. If one wishes (in the cadaver) to force the uterus through the vagina, vaginal slit in the pelvic floor, the hand seizes the fundus and corpus, while the cervix is pushed vigorously distalward in the vaginal slit, where the cer-



THE FASCIAL AND MUSCULAR PELVIC FLOOR.

FIG. 3. A transverse mesial section of the pelvis presenting the pelvic floor fasciæ and muscles; a, levator ani fascia proximal; b, levator ani muscle; c, levator ani fascia distal; d, rectum; e, sphincter ani external; f, Alcock's canal; g, obturator muscle internal; h, iliac muscle; i, iliac fascia; j, muscles of the abdominal wall; k, fascia transversalis.—ROBINSON-SCHOELER.

vix may be observed in the introitus vaginæ.

If the pressure is removed from the uterus it returns to its normal position. One cannot force the corpus and fundus through the vaginal slit with any ordinary hand power. During energetic forcing of the cervix through the vaginal slit the ligamenta lata and ligaments sacro-uterina are scarcely put on tension (they are entirely secondary supports). If all the uterine ligaments are severed and the experiment repeated, the cervix can be forced through the vagina to the introitus only. The impossibility of forcing the corpus and fundus through the vaginal slit and introitus vaginæ is due to the increasing volume of the corpus and fundus on account of the addition of the oviducts, vessels, nerves and ligamenta lata. The sacro-pubic hernia of senescence is due to atrophic conditions of the genitals which glide through the vaginal slit from diminutive volume. Ziegenspeck claims that sacro-pubic hernia (uterine prolapse) is due to the difference between intra-abdominal pressure and atmospheric pressure. Hence the primary support of the pelvic viscera (genitals) is the pelvic floor—levator ani with its proximal and distal fascia. By relaxation it includes the tractus genitalis in splanchnoptosia.

Diaphragm thoracis resembles diaphragma pelvis in physiology and anatomy. Both have (*a*) a similar fixum punctum (circulatory bony origin), (*b*) similar punctum mobile (central tendon), (*c*) both support superimposed viscera, (*d*) both have three apertures for visceral transmission, (*e*) both diaphragms are respiratory, (*f*) both muscles, by constriction, limit the apertures of visceral transmission, (*g*) both contract as a single muscle, (*h*) both share in splanchnoptosia. They differ in that contraction of the pelvic diaphragm draws the three visceral apertures proximalward and ventralward, while contraction of the thoracic diaphragm draws the visceral apertures distalward and dorsalward.

(B.) LIGMENTA UTERINA (SECONDARY SUPPORTS).

All uterine ligaments arise from the pelvic wall and become inserted in the lateral borders of the uterus. They act as guy-ropes, to maintain the uterus in a physiologic position in order to functionate. The ligamenta lata, the real neurovascular, visceral pedicle is a physiologic support only, not a mechanical, serving as a conducting bed for vessels, nerves and tubular viscera. These secondary uterine supports in genital ptosis become primary, which is a pathologic condition.

MOVEMENTS OF THE TRACTUS GENITALIS DURING RESPIRATION.

To demonstrate that the diaphragma pelvis is a muscle sharing in respiration, one need only to witness a single perineorrhaphy. Whence the proximalward and distalward movements of the levator ani are evident. To prove that the genitals share in respiration, one need only to observe the regular motion of six-month gestating uterus, or the motion of the vagina and uterus in a coughing anesthetized patient, whence not only the blue vagina everts through the vaginal slit, but the uterus may also present at the pudendum. The genitals and pelvic floor move with respiration. The respiratory movements of the genitals are the chief factors in genital ptosis. To illustrate: If, in a case of uterine prolapse, or better, sacropubic hernia, the uterus may be returned to the pelvis, and the patient told to force it distalward. She immediately inspires deeply, whence she retains the inspired air, fixes the thoracic diaphragm, and forces the uterus rapidly distalward through the vagina external to the pudendum. She accomplishes this act by respiratory motion. With relaxation of the pelvis the uterine fundus passes dorsalward, and the cervix, by this mechanism, gains entrance to the vaginal slit in the pelvic floor, whence intra-abdominal pressure forces the uterus distalward. If the uterus loses its volume, becomes atrophic, respiratory movements may force it distalward through the vaginal slit without loss of integrity of the pelvic floor.

The continual respiratory trauma when visceral supports are deranged, produce progressive sacro-pubic hernia. From study of the anatomic supports of the genitals it is evident how irrational are the surgical attempts to fix the uterus in some preconceived position by means of hysteropexy, or the shortening of some secondary uterine support. It appears that the function of respiration is not con-

fined to a single location in the spinal cord, but extends to wide areas on its egress nerves, so that man's trunk is a respiratory apparatus closed at the proximal and distal end by a diaphragm—both actively involved in respiratory movement. The relaxation of the pelvic floor and consequent genital ptosis is simply a demonstration of the pathologic anatomy and physiology of respiration. The genitals present various grades of splanchnoptosia. In the first place, the portio vaginalis is found moved distalward in the pelvic axis, the corpus may be in normal anteflexion, but more frequent in a beginning of retroflexion—the whole uterus is excessively mobile. In the second place the entire uterus lies parallel and against the sacrum (rectum). The cervix is not infrequently fixed through parametritis dorsal. According to the degree of genital splanchnoptosia arise pain in the back and sacrum, radiating pain in the extremities, menstrual disturbances, venous congestion and constipation. Later the cervix projects through the pudendum. Advanced splanchnoptosia of the genitals presents prominent features of relaxation of the pelvic floor and venous congestion.

ETIOLOGY OF GENITAL PTOSIA.

The chief etiology of genital ptosia is:

(I.) Results of parturition, *i. e.*, elongation, separation or laceration of the pelvic floor tissue (the levator ani muscle and its proximal and distal fascia).

(II.) Atrophy of the genitals.

(III.) Respiratory movements forcing the genitals distalward (constantly forcing the deranged genitals in the direction of least resistance).

(IV.) Relaxation of the thoracic and abdominal walls.

(V.) Superimposed splanchnoptotic viscera.

(VI.) Genital sub-involution (infection).

THE TREATMENT OF GENITAL SPLANCHNOPTOSIA.

The treatment should be medical, mechanical, surgical.

(I.) MEDICAL.

One of the essential remedies is visceral drainage. Hot vaginal douche (with salt and alum as ingredients), increased to twelve quarts, which contracts tissue (elastic, muscle, connective), massage, electricity, ample and horizontal rest are valuable means. The boroglyceride tampon serves as an excellent remedy. It is hygroscopic, and may be prepared so that it can be worn one to several days.

(II.) MECHANICAL.

The horizontal position should be used as much and frequently as possible. Abdominal binders (in which may be placed a pneumatic rubber pad), Achilles Rose's adhesive strapping. Galant's corsets furnish much comfort. Various kinds of pessaries may be worn.

(III.) SURGICAL.

Since the uterus is supported by the pelvic floor rational surgical procedures should be applied to it in splanchnoptosia. Relaxed pelvic floor means relaxed, elongated fibrous separation of the levator ani with its proximal and distal fascia. Hence perineorrhaphy should include the careful repair of the levator ani with its proximal and distal fascia. It is fascia that supports, not muscle. Ventral colporraphy aids in forcing the bladder proximalward and narrowing the vaginal exit. The most effective and enduring operation for splanchnoptotic genitals is: (*a*) amputation of the cervix (if required). (*b*) ventral colporrhaphy, (*c*) and extensive colpo-perieorrhaphy, *i. e.*, an extended Tait flap-splitting operation with reunion of the torn muscle and fascia of the levator ani. In cases of uterine atrophy extensive vaginal narrowing is required. For splanchnoptosia of the genitals hysterectomy should not be performed (as it renders supports less efficient). The uterus is the key to the support of the genital viscera. I have seen subjects of splanchnoptotic genitals where the uterus had been removed and subsequently the everted, distended vagina extended to the middle of the thigh with almost hopeless views of repair. As to suspending or fixing the genitals to the abdominal wall proximal to the pelvis it is an irrational operation, unphysiologic and harmful. The anatomy and physiology of the genitals belong to the pelvis.

Ventral abdominal hysteropexy should not be performed in a reproductive subject. Also patients do not present symp-

toms indicative of malposition of the uterus. The position of the uterus has no special relation to disease. As the symptoms do not emanate from the position of the uterus, fixing it will have no relation to the symptoms (except to exacerbate them). The symptoms of patients with retroversions, for example, emanate from other causes than the uterus.

[Written for the MEDICAL BRIEF.]

Plaster of Paris Dressing for Fractures and Articular Inflammations and the Abdominal Plaster Belt for Atonia Gastrica.

BY DR. A. ROSE,
New York City.

Plaster of Paris dressing for fractures was invented and introduced by the Dutch military surgeon, A. Mathijson, in the year 1852. His mode of dressing which was followed for a time, was the following: First, the bony prominences were covered with wadding, next a flannel bandage wound around the extremity, and finally the plaster bandage applied. The literature on this new method became very voluminous, as one writer says it assumed monstrous dimensions. As a matter of course it consisted to a great part of polemic; like everything new, the new way of dressing was bitterly condemned by many writers, probably by such who had tried the plaster of Paris dressing without knowing how to do it properly. From his experience in the Franco-German war of 1870 Burow relates how the plaster of Paris dressing had been applied in many instances in such faulty way that gangrene and infection of wounds (compound fractures), were caused by gross errors in the technic.

But Burow calls attention to a method of applying the plaster, namely: the application of flannel bandages before the plaster of Paris bandages were applied, a method which he does not approve, which, as far as I know, had been abandoned, but is revived again.

Speaking of his observations during the campaign, he tells that most surgeons, even those of highest ranks, applied the plaster of Paris dressing in a wrong way; namely: over flannel or muslin bandages with which the extremities had been bandaged before the plaster dressing was applied. Every dressing of an extremity with ordinary bandages, however skilfully applied, and no matter how elastic the material, exerts an unequally distributed pressure upon the soft parts. This is a fact which can be demonstrated by the more or less marked impressions the single tours of the bandages leave on the skin; impressions which disappear after longer or shorter time, after the effect on the circulation caused by unequally distributed pressure has regulated itself again. Such pressure, however, and its effect on the circulation are a disadvantage which does not exist when the plaster of Paris has been applied *lege artis* on the bare skin. When the bandage is removed, we see on its inner surface an exact cast of the surface of the extremity which had been encased; the plaster shows, not only every little hair, but also, when we apply a magnifying glass, the finest details of the skin pores, eruptions, etc. But supposing the flannel bandage should not have caused any disturbance of circulation, and should have been of no disadvantage at all, we still find how much preferable the application of the plaster of Paris dressing applied directly to the skin will offer:

1. It is cheaper.
2. The flannel or any other underlying material makes the dressing heavier.
3. The dressing without flannel or other underlying material takes less time, which is especially of importance in military surgery.

Some anonymus in criticising a book of mine, in which the effect of plaster of Paris dressing on circulation and innervation was spoken of, says: "What effect upon circulation or innervation does plaster of Paris exert in fractures or arthritis, other than that of equable immobile surface pressure called fixation?" This was written about two years ago in a scientific medical journal.

The principle of uniform pressure I had in view when I suggested the abdominal plaster belt in case of atonia gastrica, that is abdominal relaxation, to

support in first instance the relaxed abdominal muscles, in second instance to bring the displaced abdominal organs again into their physiological position, and finally to relieve gastric and nervous disorders caused by such relaxation and displacement.

In the preface of the book referred to (*) I said: "This belt is something more than such a support, as is given by an ordinary abdominal supporter or bandage, for it exerts an effect on circulation and innervation which can only be compared to that of plaster of Paris dressing in case of fracture or arthritis."

The practical use of the abdominal plaster bandage which was described first in THE MEDICAL BRIEF some years ago, should be perfectly clear to every physician. It is certain that it does away with pernicious effects frequently caused by the ordinary abdominal supporters. The uniform pressure has enormous advantages over the changing one of those supporters, quite apart from the injury done to the spinal musculature and lumbar nerves by the ordinary bandages. I have noticed that the benefit derived from the plaster belt is, in many instances, a permanent one, because we may, by this means reduce the volume of the abdomen permanently, and the diminution of abdominal volume is rapidly followed by reduced engorgement. How well the abdominal plaster belt acts in case of pain can be demonstrated in gallstone colic; here it can give relief almost as promptly as a morphine injection. But these and many more indications for the plaster belt I have shown in numerous writings to which I beg to refer. These remarks are intended principally to show the similarity of the effect of the abdominal plaster belt to that of plaster of Paris dressing.

PRACTICAL NOTES.

NO. III.

Nervous Eructation.—We all have had, in the course of our practice, patients with spasmodic paroxysmal ructus by which nothing but atmospheric air is expelled, and in which cases there is not necessarily any other stomach disorder present. This symptom is merely one of the many manifestations of neurasthenia or hysteria. These ructus do not happen during the night. In some cases they last a few minutes; in others several hours. They may happen without any special cause, or in consequence of some excitement; in some instances during or soon after meals, some cases have been described in which the ructus happened while the patient was standing or sitting, but never when in the recumbent position; the attacks would cease as soon as the patient occupied the horizontal position.

These are practical notes, and I will be as brief as possible, not enter into literature and detailed explanation, but confine myself to the fact that such patients swallow air and expel it again from the stomach into which this air had entered.

There are cases of this kind which serve for demonstration in the clinics; they are treated with all kinds of medicines, bromides, asafetida, valerian, strychnin; in fact, all kinds of anti-hysterical remedies, but they prove obstinate towards drugs, and one case may serve a lecturer for years to bring it before the class. A very good, and in, perhaps, most cases, effective remedy, is to order patients to keep the mouth wide open, in order to prevent the act of swallowing, to have them place a wedge between the upper and lower rows of teeth, the like as the dentists use when they administer laughing gas or fill the teeth. Have the patient retain the wedge as long as possible, and place it between the teeth again as soon as the eructation begins. In some cases we have, in order to prevent the symptom with certainty, to keep the upper and lower jaws apart *ad maximum*, in others, especially in later stages of the course of treatment, less and less small wedges can be selected.

There are cases, it is true, in which complications exist, and in which the wedge alone will not suffice, but in the majority this very simple means will give perfect satisfaction, and make all medical treatment superfluous.

Strychnine Injections in Cases of Hysteria or Neurasthenia.—Each and every one of us every-day practitioners has had his patience tried when treating cases of hysteria. We exhaust all our skill, more or less, in vain in some instances. We pre-

* Atonia Gastrica, by A. Rose and R. C. Kemp. Funk and Wagnalls Company, New York, 1905.

scribe with unsatisfactory results, sometimes asafetida, valerian, gold, bromides; in fact, we may go through the whole litany of drugs recommended, and our patients are obstinate to respond. None of all the means at our disposal will compare in efficiency with strychnine injections, one injection of 1/30-grain for twelve consecutive days. Not only will this treatment cure the symptoms promptly, but permanently at least for years in the great majority of cases. And what a triumph if such a patient has been treated in vain before for a long period, and by many physicians. The same patient may have taken strychnine by the mouth for months, or even for a year, and longer, without the slightest, or with very little benefit. Here the action of strychnine taken by the mouth, is moonshine when compared with its effect hypodermically. There are cases, however, in which those injections of 1/30-grain of strychnine should form only part of the therapy, cases, namely: in which there is abdominal relaxation; that is, relaxation of the abdominal muscles manifested by the presence of splashing sound. Such abdominal relaxation, called atonia gastrica, or gastroptosia, may be the cause of all the nervous symptoms, and has to be relieved by means of plaster strapping, suggested by me, and described in THE MEDICAL BRIEF, and more fully in my book: "Atonia Gastrica." Therefore, let us examine in all cases of hysteria or neurasthenia first for the splashing sound, and relieve before we commence with the injections the relaxation of the abdominal wall. The result will be marvelous. A very important point in this treatment is that not only the hypodermatic syringe is thoroughly sterilized, by having it in boiling water for some time before we make an injection, but to be positive that the strychnine solution is aseptic. There are so-called ampullæ in the market, each one containing 1/30-grain of strychnine nitricum solution. Since I have used these ampullæ, instead of the ordinary hypodermic tablets, I have never seen an inflammation follow the puncture, much less an abscess. Of course, the skin at the point where we intend to inject has to be sterilized according to antiseptic rules.

There is another advantage characteristic of this treatment. The patient has to come to our office or we have to go to the house for twelve consecutive days, and this impresses the patient favorably; seeing something done every day by the physician himself instead of taking a medicine in which confidence may have been lost to some extent, and in which we can ourselves not have much confidence.

126 East Twenty-ninth Street.

[Written for the MEDICAL BRIEF.]

Inadequate Nutrition and Drug Addiction.

BY SAMUEL S. WALLIAN, A. M., M. D.,
New York.

In a pamphlet reprinted from the *Medico-Legal Journal*, entitled: "A Review of Drug Consumption and Alcohol as Found in Proprietary Medicines," Professor Grinnell, late Dean of the Medical Department of Vermont State University, made this astonishing statement:

"For a great many years I have believed that every human being craves some artificial stimulant. Ask yourself what your stimulant is. What is mine? What is my neighbor's? We all have one, and after thirty years in practice I can truthfully voice the opinion generally entertained by the medical profession that every human being craves and requires some artificial stimulant."

If intended as an argument corroborating the theologic theory or Mosaic tradition of the Fall of Man, the statement has some plausibility. Logically, biologically and physiologically it is entirely unwarranted, and emanating from such accredited authority, it is inexplicable.

To admit the truth of this preposterous assumption would be to impugn the author of the race as an egregious bungler.

In discussing the Education Bill before the English Parliament Dr. Forbes Winslow startled his hearers by asserting that, "According to statistics on insanity it can be shown that before long there will be actually in the world more lunatics than sane persons. The burning problem of the day is how to prevent this increase of insanity? What is the use of wasting

time and energy on an education bill when we have before us the absorbing problem, the contemplation of an insane world to deal with?"

Following Professor Grinnell's line of reasoning, shall we say that there was a vein of insanity in the original Adam which is being legitimately transmitted even to the present generation?

Preliminary to a search for some fundamental cause or causes on which the foregoing assumptions must have been based, the following syllogisms seem apropos:

A normal child, born into a normal environment, and fed upon normal food, barring accidents, will develop into a normal man.

A normally born, bred, fed, environed and exercised man will crave neither stimulants nor narcotics, nor will he drift into insanity.

The craving for stimulants and narcotics is always artificial and acquired.

Insanity, when not of traumatic origin, results from disordered or excessive mental activity, and is, therefore, also acquired, and not in any ordinary sense hereditary.

Both mental bias and acquired appetites are prima facie evidence of degeneracy, and degeneracy is abnormal.

The question of heredity is confusing, since the word normal is so vaguely and variously defined.

To be normal a child must be born of healthy parents; whereas a large majority of parents are not physically sound.

Again, the modern child is not normally fed. Hence his tendency to degenerate is manifest at such an early period that the superficial observer is apt to attribute any marked physical or physiological peculiarities to heredity.

For example, in an increasingly large number of cases, Nature's source of infant nourishment, the mother's breast, is denied the child, and this normal aliment, mother's milk, warm from its living fount and uncontaminated by contact with the air, or with any form of artificial container, or dietetically modified by one or another artificial process of preservation, is substituted by artificial pabulum, or by milk drawn from the udder of an animal which secreted it for the young of its own kind, instead of for a human being. Even this cow's milk is never fed to infants in a fresh condition, but always, necessarily, after it has been kept some hours, and has been subjected to some one of the various preserving processes, either heat, cold or the addition of more or less objectionable chemical preservatives.

No artificial food can be made to more than approximately simulate mother's milk, and as a consequence the artificially-fed human infant receives too much of one proximate principle and not enough of another; too much casein, and not enough fat and milk sugar. Assuming that any lack of chemical or nutritive elements can be artificially remedied, the fabricated or modified product is invariably, by either heat, cold or other process or manipulation, practically robbed of its original vitality, without which essential quality it can not be made a normal, physiological or ideal nourishment for a child.

The breeding and feeding of domesticated animals has been made a matter of scientific system and absolute certainty. Even in the vegetable world Blodgett and Burbank have demonstrated the entire feasibility of perfecting old and evolving new varieties, if not species, at will. If a tenth part as much had been accomplished in the neglected field of stirpiculture there would be no occasion for the wide divergence of dietetic opinion that now prevails.

It is evident that as regards the improvement of the human race, and the feeding of human beings with a view to perfecting the species, our physiologic chemists and chemical physiologists, as well as the alleged dietetic experts have made little progress. Have they not all along, in spite of their much profound and technical laboratory work, exaggerated superficial data, and failed to get at the fundamental, and yet, no doubt, simple principles of nutritional processes?

Our most expert analytical chemists have not yet succeeded in preparing wholesome or satisfactory nutrition, by synthetic processes, from inorganic material. It is universally admitted that while cell-life is fundamental and indispensable to all life, only plant cells possess the innate power of transforming inorganic into organic substance. It fol-

lows that, since the animal cell requires strictly organic material for its growth, sustenance and repair, the vegetable cell is necessarily its ultimate, and virtually it sole source of supply. The advocates of an exclusively vegetable diet for the human race, therefore, have both scientific deduction and biologic law behind them. Practically they have not made good their claims, because of a palpable ignorance or disregard of the laws of selection and proportion. Among other things they have failed to realize that plant cells, in order to be ideal as sources of cell reproduction, growth and repair, must be supplied in as nearly a normal condition as possible. Any change that destroys their normal structure, disintegrates their molecular arrangement, or decomposes their chemical constituents necessarily interferes with their value as food.

In the feeding of human beings modern fashion, invention and innovation have interposed countless processes of artificial modification and gustatory compromise. In how far have these intrusions revolutionized the primitive feeding habits of the race?

The primal man, who, it is claimed, originated in the tropics, was undoubtedly a stranger to fire. It behooves us to inquire whether the advent of the cook was a dietetic and hygienic calamity.

The cook is the presiding genius of the domestic crematory. He subjects most of his foodstuffs to intense and prolonged heat. Heat effectually destroys cell structure, and when prolonged and intense, to a greater or less extent breaks up chemical combinations, thus reversing the primary process of growth in the plant's history, and relegating its contained mineral elements back to their inorganic condition. By these subtle and as yet scientifically unconsidered changes in structure, molecular condition, and chemical combination may not an apparently perfectly constituted dietary, chemically speaking, be rendered incompetent? May it not be generous in both quality and quantity; ideal as to its proportions of proteids, carbohydrates and fats, and capable of responding to the most exacting chemical analysis as to its mineral constituents, and yet lack that essential organic property of direct and easy assimilability, without which no food can pass final and vital inspection as perfect nourishment?

These minute mineral elements are in constant demand for the building, sustaining and replenishing of gray matter, of brain and nerve tissue, which constitute the dynamo, magnets and connecting wires of the thinking, talking and walking human ego. Then is it not the blind hunger of the robbed system for these refined, concentrated and absolutely indispensable elements that goads the unsatisfied organism and creates a morbid appetite, which seeks a substitute for natural gratification in artificial stimuli, or assuages its clamor by means of nervines and narcotics?

If these postulates are accepted then the argument that all men crave some form of artificial stimulant simply asserts that all men are inadequately nourished.

Again, the substances appealed to are by no means limited to alcoholics and narcotics. It is a long list, and includes sedatives, vital excitants, and mere irritants of nerve-endings, particularly those of taste and smell; ranging all the way from items usually considered harmless, such as tea, coffee and cocoa, to cocaine, cannabis indica, chloroform, cayenne pepper, and even common salt. It includes morphine and other forms of opium, quinine, strychnine, malted liquors, wines, whisky, and all the countless varieties of alcoholics, as well as a nameless array of "tonics" and alleged medicinal makeshifts.

The commonest, most popular and most seductive of all the stimulant-narcotics in use the world over is nicotine. Every other man on the street, in the office and in the home is an habitual and inveterate smoker. Even my lady's boudoir is not safe from invasion. In all the "artistic" illustrations of the current "high-class" literature of the day the hero is almost invariably pictured with a cigar between his distorted lips, or prominently poised in his fingers, as a foreground. To such an extent does this habit prevail that the annual cost of tobacco used in the United States would wipe out the national debt; it would provide an ample fund for endowing all the colleges and universities, and defraying the cost of public instruc-

tion throughout the nation. It would lift the burden of taxation from every town, county, city and State in the Union.

And yet it is a habit which has no ghost of physiologic prop, no shadow of social warrant, and no possible moral or esthetic palliation for its existence. It slowly but surely undermines physical and mental stamina and moral sense. It lulls ambition, invites to ease, and gradually beclouds the finer sentiments in a benumbing atmosphere of apathy and indifference.

Since the use of this seductive narcotic has become so almost universal as to be looked upon as one of the accomplishments of polite society, if not an actual necessity of every day life, no apology is necessary for according it a little further consideration.

The modern bottle-fed infant clamors for some element that is lacking in its daily food. His indolent, ignorant or over-indulgent nurse or mother stills his instinctive plaint by placing between his eager lips a delusive make-shift in the form of a dirty rubber nipple. The swindled little draftsman is made to spend hours every day, practising his "pull," the only returns being some spasms of wind colic, and a little permanent deformity of his malar muscles and the normal outline of his lower facial contour. When the nipple is taken from him he often substitutes his thumb. When he is old enough to desist, from a sense of shame, he bites his nails, or beats the "devil's tattoo," with his fingers, and a little later on takes to pipe or cigar with such a sense of relief and satisfaction that one would think he had been born to the habit. It is Karl Groos who insists that smoking is a survival of the thumb-sucking instinct of infancy. Add to this a blind craving for special elements lacking in his food, he experiences a double incentive to seek something that will both thrill and obtund his over-tense nerves, lull his complaining instincts into temporary satisfaction; something that will waft him to realms of forgetfulness, and paint for him shadowy castles en Espagne.

Summarizing the physiologic effects of the several alkaloids imbibed by smokers, as set forth by those who have minutely studied the subject, the constant symptoms are contractions of the pupils, salivation, cerebral anemia, vasomotor constriction, cardiac asystole, paralysis and convulsions. Tobacco acts upon the spinal and sympathetic systems, and in a lesser degree on the vasomotor system, the cerebrum, cerebellum and nerves of special sense.

It is only a matter of time when the confirmed smoker will acquire a "tobacco heart," "smoker's dyspepsia," chronic insomnia, or some other form of neurotic disease. In extremely sensitive natures the physical and psychic degeneration advances stealthily and steadily until the victim adds another to Forbes Winslow's list of the actually insane.

Finally, it is the inadequately fed who annually swell the great army of psychic derelicts who suffer and sin against their own natures, simply because they lack assimilable phosphorus and other psychic props, in their daily ration.

To admit that Professor Grinnell quotes the prevailing opinion of the profession proves nothing. Pontius Pilate voiced the opinion of the majority when he surrendered Jesus to the mob. And the leaders of the mob proceeded to exemplify the first recorded instance of lynch law by crucifying a man who had committed no legal wrong, but had merely promulgated a psychic innovation that threatened to undermine the treasured traditions and prevailing prejudices of the zealous majority, whose zeal was born of unadulterated ignorance.

509 Fifth Avenue.

[Written for the MEDICAL BRIEF.]

Perfection Man's Goal.

BY R. C. CAVE,
St. Louis, Mo.

According to orthodox theology, man was created perfect, fell from his perfect state, and can never be perfect again. The best he can hope for now is to be saved by grace from the consequences of his imperfection. Even the comparatively few individuals of the race who will finally be numbered among the righteous, and received into peace and blessedness at the right hand of the Father, will not

be righteous in reality, but will merely have the righteousness of another imputed to them. If one were to declare it to be his intention to save himself by becoming perfect, instead of by relying on the merits of Jesus, he would be regarded, by orthodox people, as an irreverent blasphemer.

As stated in the last number of the BRIEF, I do not accept this orthodox teaching. To my mind, it is more consistent with the evidence in the case, more reasonable, and more creditable to the Creator, to reverse the orthodox order, and believe that man was imperfect in the beginning; that he has risen, instead of fallen, from his original state, and that he is destined to attain perfection in the end.

Bringing a perfect being into existence only to fall into a hopeless state of imperfection, can hardly be considered an act worthy of an infinitely wise and loving God. It is only by rising into perfection that man can justify his creation, and show forth the wisdom and goodness of his Creator. He can no more "glorify" God by accepting divine favors, earned by a Savior's toil and sweat, and tears and blood, than children can honor their father by living on his bounty and remaining unworthy of it. Only to the extent that it is perfect, can any work manifest the perfection of the workman.

In support of the belief that man will attain perfection hereafter, we have the history of his progress hitherto. His past is a prophecy of his future. The Divine Energy which, by the natural process of evolution, brought him forth from the womb of nature, as a self-conscious and self-active being, endowed with reason and conscience to guide him, and which, through the ages since his birth, has steadily increased his knowledge, extended his power, quickened his moral sense, raised him from savagism to civilization, and made him more and more human, is not, and can not be, exhausted. That Divine Energy is more potent in his life today than ever before; and we may well believe that it will continue to work in him to will, and to do the divine pleasure, until he shall be perfect, even as God is perfect.

But it may be said, evolution is not synonymous with progress. In its processes we find degeneration as well as growth, death as well as life. In regard to the lower orders of existence, this is unquestionably true; but I am not convinced of its truth in the case of man. He is a spiritual being. In him the Divine Energy has evolved itself into a self-conscious, self-active, and self-guiding personality, capable of progress to which we can fix no limit. He is an individuation of the universal principle of life. In him the Divine Spirit has come to birth as a living soul—a self-directing life. He is an incarnation of God; and, while his body may "return unto dust," the God incarnated in that body can not die.

As a spiritual being, man must be immortal; and he is impelled to progress by his environment, and the necessities of his nature. He finds himself in a physical environment in which he is compelled to exert his powers to supply his wants and save himself from suffering; and, through such exertion, his faculties are developed, his knowledge is increased, and he is raised to a higher plane of being. In his moral environment, also, there exists the necessity for struggle. He finds a "law in his members warring against the law of his spirit," and tempting him to wrong. But the final issue of even this is progress. If he resists and overcomes the temptation, his spiritual powers are thereby made stronger, and he is spiritually elevated. If he yields to temptation, he loses innocence, it is true, but he is still on the road to virtue, which is better than innocence. Even through doing wrong, he is being brought into the state in which he will be incapable of wrong. Wrongdoing has its penalties, and, sooner or later, must bring the wrongdoer to that condition in which, like the prodigal son of the parable, he will say: "I will arise and go to my father," and from which he will return incapable of being tempted to do the wrong again. Thus, as some one has said, "even when man goes wrong, he is going "righter." His falls are falls upward. His surroundings and necessities irresistibly impel him towards perfection, as his final goal.

3928 West Belle Place.

[Written for the MEDICAL BRIEF.]

Homeopathy vs. Allopathy.

BY N. SISCA, M. D.,
Killarney, Queensland. Australia.

(Continued from page 377.)

XII.

CONCLUSION.

Such, then, is homeopathy. Neither a theory, nor an hypothesis, likely to be exploded or set aside from one day to another, but a workable, and, to all appearances, successful, system of therapeutics; founded on a great principle, which, though not quite universal in its applications to the treatment of disease, yet covers such a vast area of the field of medicine as to make its limitations, whatever they may be, hardly worth mentioning. A principle which enables the physician to discover a meaning, and find a clew to the selection of his remedies in every symptom of disease, no matter how trivial and unimportant it may seem to be; a principle which, as the homeopaths maintain, robs medical practice of doubt, and of fear, and gives the practitioner the assurance that, if a case is at all curable, homeopathy has a remedy for it; a principle, which, resting, as it does, on the firm basis of a natural law, has made it possible for homeopathy, and the handful of its practitioners, not only not to be crushed out of existence, but to hold their own and keep on progressing through a long, wearisome century of unremitting opposition. That principle is *similia similibus curentur.*

As a system of therapeutics, we have seen that homeopathy possesses a *materia medica*, which is unquestionably richer than our own, and which contains remedies not only for the ordinary symptoms of disease, but also for its so-called modalities. Where is the allopath, for instance, who would think of questioning his patient as to whether a rheumatic or neuralgic pain is on the right or the left side of the body; whether it is better at rest or on moving about, and *vice versa;* whether it is better or worse by pressure; whether an ailment is better in wet or dry, cold or hot weather; whether a patient feels hot, and yet likes hot drinks, is thirsty, and yet takes drinks only by sips; whether a cough is relieved by a sip of cold water; whether an aching tooth feels as if it were too long, etc., etc.? Why, that is worse than nonsense, an allopath would say, and so it would undoubtedly seem to most of us, but what does it matter what we think or refuse to think about it? The fact is there all the same, that it is this kind of nonsense that has done a great deal for homeopathy, and that it is responsible for many of its successes.

The question may now well be asked: What has prevented us from knowing homeopathy, thus depriving us of the opportunity of increasing our knowledge, and widening the range of our usefulness and proficiency as physicians? If there is truth in the homeopathic system of treating disease, Is it right? Is it moral? Is it christian that the small number of those who are known as avowed homeopaths, should be, as it were, the only depositaries of it, and that the millions of people who are under the care of allopathic practitioners, should be denied the benefit of it?

An editorial paragraph in a recent issue of THE MEDICAL BRIEF tells us that no good physician should admit that he has a superior. Quite right, but what makes the good physician? Is it not the experience of a good few among us, who practice in places where there are also homeopathic practitioners, that at one time or another we have had to acknowledge that there are cases in which allopathic treatment fails, and homeopathic treatment succeeds? And is the man a good physician who, having once had such an experience, allows himself rest until he has found out the why and the wherefore of it?

Take a case of pleuritic exudation. What else has the allopathic practitioner to rely upon, in order to promote absorption, but the external application of iodine, with all its accompaniments of burning and a puckered skin, and very poor results withal? The homeopath, instead, more often than not, succeeds in clearing away the fluid from the pleural sac with his bryonia, thus saving his patient not only the untold miseries of the iodine painting, but, what is more, the risk of empyema and death. Does the homeopath always succeed? I do not know; but if he

has succeeded only once, and that as far back as one hundred years ago, and I happen to know it, do you not think I should try it?

I have before me at this moment a recent publication, where, in the course of an article on the alkaloidal treatment of pneumonia bryonin is recommended for the pleuritic pain. Whence does this notion come to us, that bryonin is good for the pleuritic pain of pneumonia? Why has it not been, why should it not be, made known to every allopathic physician, from one hemisphere to the other, that bryonia is one of the most valuable remedies in the homeopathic *materia medica*, which, under the guidance of, and in accordance with, the principle *similia similibus*, Hahnemann first, and his successors afterwards, found out to be almost a specific for pleuritic pains, as well as for the reabsorption of pleuritic or other serous exudations? At a time when everybody else has the avenues of knowledge wide open before him, so that every man, woman and child may know as much as it is possible for them to know, the qualified allopathic physician, who has spent the best years of his life in educating himself, simply throws overboard his intellectual independence, and unconcernedly allows a book, a periodical, or a teacher to monopolize knowledge for him, and to debar him from knowing homeopathy, on the plea that homeopathy is the accursed thing which no self-respecting physician should dare touch.

Quousque tandem, How long shall that be so? How much longer shall we go on playing at "hide and seek" with homeopathy, belittling it in public, and using its remedies in secret? Humanity, as well as our dignity and our interest, all demand that it shall be so no longer.

And, now a word on the much-debated question of consultation with homeopaths, with reference to which I could not do better than quote the following letter, published under the heading, "A Plea for Tolerance," in the *British Medical Journal* of December 26, 1897: * * * "In my opinion (shared, I trust, by a large number of your readers), our past conduct in this matter has been anything but creditable to our good sense, to say nothing of our humanity. I am utterly incredulous of the ill-results for our patients, and the ignominy for ourselves from the practice of meeting homeopaths in consultation. What can be more ignominious than our present position before the public, of declining to meet men who, equally with ourselves, have passed through the legal curriculum, and so earned a right to an opinion? Why not credit these gentlemen with the possession of some tact, some desire to find a point of agreement with ourselves? It is generally admitted that Hahnemann's influence upon our own methods of practice has been and is considerable, and I could easily name a number of drugs which we have appropriated (not always with any acknowledgment) from the homeopathic armamentarium. * * * Our present boycotting attitude towards homeopaths amounts really to social persecution, but 'the blood of the martyrs is the seed of a church.' We have learned something from homeopaths in the past. Why not learn more, if more is to be learned, and so prove to the world that our sole care is that the truth alone shall prevail?"

To which, by way of comment, the following editorial remarks were appended in the London *Monthly Homeopathic Review*, of February, 1898: "The history of all great truths has repeatedly shown them to have struggled through a period of determined opposition to their reception. But the time comes when the struggling gradually ceases, when knowledge increases, when prejudices abate, when the claims of experience make themselves felt, when inquiry and investigation, freed from the shackles of vested and personal interest, become generally and carefully pursued, and the truth shines forth with a light so brilliant that its acceptance can no longer be resisted."

And with no truer words than those could I wish to conclude these notes.

My task is over for the present, and I trust that I have succeeded in giving good reasons for what I said at the beginning, namely, that the controversy between homeopathy and allopathy is of great importance to us, and that homeopathy is worth studying, because there is much in it that is worth knowing. I have spoken plainly, because I wanted to speak faithfully, yet, in spite of that, or, perhaps, be-

cause of that, I believe that these notes will not have been written in vain. And if so, the credit will not so much belong to me as it will to the editor of this journal, whose liberal and far-sighted broad-mindedness, and whose highly commendable practice of placing before his readers both sides of a question, have made it possible for them to be brought before the notice of a large section of the profession. Such a freedom from bigotry, such a spirit of "no fear and no favor," in a medical journal must necessarily go far towards making it a true friend to its readers, and whilst once again expressing my gratitude to its editor, I also express the hope that for a long time to come THE MEDICAL BRIEF will continue to be found in the vanguard of liberal and enlightened medical journalism.

Last, but by no means least, I am only too glad to acknowledge my indebtedness to the London *Monthly Homeopathic Review*, from several of whose yearly volumes I have drawn freely in the compilation of my notes.

[Written for the MEDICAL BRIEF.]

A Specific in the Cure of Snake-Bite.

BY C. R. KING, M. D.,

Atlanta, Ga.

Over thirty years ago I was stopping one night with a farmer in Louisiana, and he very kindly offered to tell me of a sure cure for rattlesnake bite. Very well, I was always anxious to learn of a sure cure for anything. So he proceeded to tell me of a visit the summer before to Georgia, during which time he called on his uncle, Judge Franks. And while he and his uncle and a cousin from far out in the Rocky Mountains region were sitting on the piazza a rattlesnake crawled out from under the house. His uncle wanted to kill the snake, but his cousin said not to. "Let me show you something." So he pulled off his boot and sock, and kicked the snake in the mouth with his bare foot until the snake became mad and bit him on the top of his foot. He then went behind the house, took something in his mouth, chewed and swallowed it. He then pulled off the other boot and sock, and by this time the snake was in a coil, very mad, and ready to strike. He needed only to kick the snake when it bit him on top of the other foot. He again slipped behind the house, took something in his mouth, came out, put on his socks and boots, killed the snake, and came into the house. His uncle said, "John, I will give you one thousand dollars if you will tell me what you took when you went behind the house." "No," said John. "Uncle, I will not take your money, but here I will show you," taking from his pocket a lump of alum the size of a hen's egg. "This is it. I took a piece the size of the end of my finger, chewed it and swallowed it. It is a cure; it is a certain cure for any snake bite poison on earth."

In my travels over many Southern States I told hundreds of people about it, and, while I never had an opportunity to try it, I often had people tell me that they had tried the alum cure in a snake bite the other day, and it was all right—it cured the patient at once. One man told me he tried it and gave some spirits of ammonia at the same time, and did not know whether it was one or the other, or both, that did the work. So, after many years—about fifteen years ago—I saw a double-column write-up in the *Atlanta Constitution* from one of our missionaries in India, who was also a physician. He said one day he watched a snake juggler, or snake charmer, making his snakes dance. They were of the deadly cobra variety, hideous-headed reptiles, whose bite was certain death in a few minutes. And he saw the snakes get vicious and bite the keeper, when he would turn up a small bottle, drink some of the contents, and go on with the dance, apparently never getting sick. So our missionary prevailed on the snake keeper to tell him what the remedy was he drank from the vial. He told him it was the bile of the cobra snakes he had killed, and the bile of the cobra snake was a true antidote for cobra poison. As the missionary in India had to treat a great many snake bites every year, he tried the cobra bile, and found it an unfailing cure for the deadly poison from the cobra bite. He soon found he could not procure enough of the cobra bile, so he procured the bile of the blacksnake, a non-poisonous reptile, and he found it as true an antidote to the

poison of the cobra bite as the bile of the cobra snake was, and, still having more snake bites than he could procure snake bile to treat, he tried the bile of the ox, and found it as effective an antidote for the deadly cobra poison as either blacksnake or cobra bile. And when I read that I at once began to think why the alum was such an immediate cure for our Rocky Mountains rattlesnake, whose bite is so fatal, and other poisonous snakes. I know, as you may know, that alum taken into the stomach causes at once the bile tubes to force the bile out into the duodenal canal in gushing quantities, and enough will cause it to regurgitate into the stomach, and cause the patient to vomit, as in an old country woman giving her child alum and honey in case of croup until the child vomits, when the croup is relieved. So is it an unreasonable conclusion, where we know we can give one-third of a teaspoonful of powdered alum and two-thirds of a teaspoonful of white sugar, repeated every two hours in case of jaundice, and cause the bile to flow freely, more so than from any other remedy I ever gave, and fade out the jaundice in two or three days by opening up the catarrhal ductus choleductus, draining out the bile quicker than chionanthus or calomel, or all combined? Then I say is it unreasonable, or irrational, to presume that it is our patient's own bile that was caused by the doses of alum to flow out of the bile tubes and antidote the poison, and cure our patient so quickly, and save him all suffering usually attending the poisonous snake bite.

A hunter, in the mountains of Georgia, where his dogs are often bitten by the mountain rattlers, carries a pocketful of alum, and when one of his dogs are bitten he pours a quantity of alum down his dog's throat, and in a few minutes the dog goes on in the chase. Don't know where the hunter learned that alum is an antidote to snake bite, but here is an interesting story along the same line. I was relating the above to my friend, Dr. Mitchell, of Atlanta, and when I had finished, he said: "Well, Doctor, I can tell you something startling along that line, almost confirming all you say. Several years ago, in lower Georgia, I was called in to witness a test case of a rattlesnake having its poison teeth. A fakir came into our town selling a wonderful, all-healing and cleansing soap, and he had with him, as part of his show, about fifty of the largest diamond-sides rattlesnakes. He would let any one of them bite his naked arm anywhere from the shoulder down to his hand for a dollar. At last the community became skeptical, and he bet them a thousand dollars to a hundred dollars that his snakes—every one—had their poison fangs as he had caught them in the woods, and I was called in to witness the test. Now the fakir said to me, "Doctor, I have some snakes; they can select any one they please, and if that snake bites me I will die to prove a truth which I can not afford to do just now for their one hundred dollars. And if I take my antidote the poison will not hurt me, and that does not prove what I want, so let them select any animal they wish, and select any snake in the cage, and we will test it, and leave it to you to say whether they take my one thousand dollars or I take their one hundred." All right. So they selected a year-old boar hog and a large, old she rattlesnake (the fakir took her up in his naked arms), and put her in a dry goods box on the ground, with loose planks on one side, and then poked the snake until she was so mad that she was furious. They fed the hog up to the box, and when he was eating the corn, and had turned his head away from the box, they slipped the plank away and the snake, who was viciously mad, made a lunge at the hog and landed her fangs deep into his testicles, and in just nine minutes the hog was dead. One of the bystanders, who had lost ten dollars on the bet, picked up his dog, "Trip," and threw him on the snake, saying, "Now try 'Trip,'" and the snake landed on the jaw and in fourteen minutes "Trip" was a dead dog. The fakir took in the one hundred dollars. "Say your name is Mitchell, Doctor?" "Yes." "Are you related to old Dr. Mitchell, up somewhere in the States?" "Yes, I am his son." "Are you Jim Mitchell?" "Yes." "Then I am Joe Ramsey, your boyhood schoolmate."

"Well, Joe, tell me of this wonderful snake-bite cure you have, what it is and where you got it." "Doctor, it is only a strong solution of alum, with some am-

monia water in it. I got it in Coryell County, Texas." That was the next county to where I lived many years ago, and practiced medicine in the early '70s to 1890, when I came to Atlanta, where I have told hundreds of people the story about alum curing snake bite. I never had a chance to try it, but country people hearing of this told how they had tried it, and said it was a perfect cure. One man (and I believe he lived in Coryell County, Texas) told me he had tried alum with ammonia, and it certainly cured, but could not tell which did the work, but Joe Ramsey, who had picked up his cure in Coryell County, was using both successfully. Now, my dear doctors, do we need more proof than thirty-two years' success, and if that is all true, do we need to hunt further for a cure for snake bite poison? Or, perhaps we have in alum the specific for the poison of the tarantula, the centipede, the stinging scarpia, the hornet, the wasp, and the bee sting. I have not tried it, and ask all who have a chance to try it to let us know through the BRIEF. I know it was tried once where a man was quickly dying from the sting of the ocean ray—stinging ray, an ocean fish whose sting is almost fatal—and it relieved and cured him in a few hours, where all hope was gone. Try it, everyone who has an opportunity, and let us hear from all in America, Europe and India, through the grand old cosmopolitan, our MEDICAL BRIEF, and let the world know here is the hope of a remedy that is simple, indeed, and a cure for snake bites. If this is as good and sure a cure for all snake bites as I think, with the evidence I have from others, then we need nothing more, and the man who reads this and does not stop and think, remember it, and try it, reminds me of a man running after a street car, and after it stops for him to get on and sit down and ride, he just keeps on running. I believe that when we find out a good thing, use it. I know medicine is a science, but the practice of medicine is considered, by many very sensible people, to be a humbug, and there are so few specifics that for the purpose they should be used never failing, that when we find one, even though we do not know its original discoverer, only know that it is no animal serum or antitoxin, which, perhaps, were it not for the carbolic acid it contains, would be more correctly represented with the first four letters left off and that it is not from Berlin, but originated right here in our own country, perhaps among our farmers, or our rugged frontier mountain climbers of the far West, where rattlesnakes grow so large.

512 Austell Building.

[Written for the MEDICAL BRIEF.]

Obstetrics.

BY F. H. LONGLEY, M. D.,
North Platte, Neb.

I have been reading an article in the BRIEF, March number, page 223, "Arm Down and Head Behind the Shoulder," by C. D. R. Kirk, M. D.

Without comment, allow me to suggest an infallible method to adopt, that the late Professor John King, M. D., of Cincinnati, Ohio, gave me in 1866. I had several of those troublesome cases before Professor King gave me the "cue." By following his directions, we have no trouble with cases of the "arm down," etc.

For example, have your patient thoroughly anesthetized, and you find the right "arm down," you will advance with right hand extended, as though you were about to shake hands, continue to extend the right hand until you find one or both feet, and bring down the one or both. Should you find the left "arm down," introduce the left hand and you will make no mistake.

About three years ago, Dr. J. P. Dullard was called to the Third Ward at midnight to attend Mrs. C.; found right "arm down." He worked with her until three in the morning, then the late Dr. F. N. Dick was called in to assist. At five o'clock in the morning the writer was called in, and within thirty minutes she was delivered of a dead child, full grown. Mother got along nicely; no trouble.

The following week Dr. J. P. Dullard was called to wait upon Mrs. M, in the Second Ward, and found left "arm down." The Doctor sent a hurry-up message for the writer. Anesthetic was administered, and in a short time an eight-months dead child was born.

By adopting the above-described course the back of the hand is at all times right, and we get the feet.

[Written for the MEDICAL BRIEF.]

Influenza and Intermittent Fever.

BY JOSEPH D. HARRIGAN, M. D.,
New York City.

In several articles written recently, after comparing the symptoms of influenza with those of cholera, typhus fever, and relapsing fever, I advanced the theory that these and other epidemic diseases of this class are based on one common set of symptoms as a foundation and framework.

Any one can verify for himself the truth of this theory by making similar comparisons.

Paralleling the so-called phenomena of the various epidemic diseases, one can not but be struck by the remarkable preponderance of purely influenzic symptoms throughout them all. In none of them, however, are the analogies more markedly prominent than in influenza and intermittent fever. In fact, the resemblance of these two diseases to each other is so pronounced that one feels perfectly safe in assuming that the causative factor of production in the one case will also be found to be essentially the same in the other.

So that if, as many believe, marsh gas, or carburetted hydrogen, is the cause of intermittent fever, we would be compelled to seek for some similar chemical as the cause of influenza. A comparison of the two diseases will, I feel sure, justify one in making this quest.

Taking up the various symptoms, according to Zuelzer on "Influenza," and Mertz on "Malarial Diseases," we find the following recorded observations:

The Onset—"In influenza the onset of the disease is generally sudden. * * * It is marked by a decided chill, or by malaise, lasting several hours, with slight chills, alternating with heat. Only in rare cases are we apt to have malaise for several days, and an established cold beforehand."

In intermittent fever, according to Mertz:

"* * * The period of incubation may be of variable length. I have repeatedly satisfied myself that the disease may appear immediately after the reception of the injurious influence. For this purpose I have sat down beside marshy ditches, which were in process of drying, selecting those in particular that were distinguished by their putrid exhalations. As soon as within half an hour I would experience a slight disturbance of vision, ringing in the ears, dizziness, a feeling of roughness and burning in the throat, nausea, choking sensations, and chilliness, and a few hours later an attack of fever, which was generally slight.

Salisbury states that when, in the pursuit of his investigations, he passed over a stretch of marshy moorland, * * * he used to experience a peculiar sensation of heat and dryness in the fauces and throat, extending down to the bronchi, and accompanied by a constant impulse to hawk or clear his throat."

Professor Flint says, concerning intermittent fever:

"In the majority of cases the attack is sudden. In a certain proportion of cases, however, there are premonitions for a variable period."

Speaking of the variations in mode of onset of intermittent fever, Mertz says:

"An attack of simple, benign, intermittent fever is not seldom preceded, in persons inhabiting a malarious region, by a prodromal stage, lasting from six to eight days, or even longer, which, in itself, shows but little that is characteristic, and justifies no conclusions as to the disease which is to follow. The symptoms consist in general disturbances, such as occur also in other acute infectious diseases, and often suggest typhoid, rather than intermittent fever."

This statement would naturally lead us to inferentially assume that, in persons living in regions not malarious, the attack, in case the disease poison were conveyed thither, would, in all probability, be sudden.

It is to be particularly noted that Professor Hertz makes mention of these prodromal symptoms, in connection with simple, benign intermittent. What this article has to deal with, though, is not with this form of the disease, nor any one or other form exclusively. In comparing it with influenza, we must bring to bear a broad-minded consideration of the entire field of intermittent fever, no matter under what qualifying name, typical of its severity, its geographical localization, or

distribution, its so-called "complications," etc., it may pose. Whether it be "benign" or "pernicious," "fever and ague" or "shakes," "icteric" or "neuralgic," "Panama" or "Chagres," "masked" or otherwise, the consensus of opinion is in accord in declaring that the essential etiological factor pertaining to its genesis is to be found in some emanation or emanations arising from the swamp lands, or from freshly-upturned moist earth.

As it is a well-known fact that intermittent fever, in the neighborhood of salt marshes, is more pernicious than that belonging to other swampy localities, it can be safely predicted that the differences in severity depend principally upon the environments, which, scientifically considered, would mean the chemicals going to make up earth, air and water. The symptomatic phenomena must, consequently, suffer wide variations, and, in fact, the disease be almost impossible of differentiation from other diseases of the same class. On the other hand, influenza can run the gamut of symptoms of these diseases in exactly similar manner, and is, in my humble opinion, entitled to be called intermittent just as logically as any of those diseases bearing that title.

Mucous and Serous Membranes.—In influenza, Zuelzer says:

"Almost invariably a considerable portion of the mucous membrane, especially that of the respiratory organs, is affected, and this is the characteristic feature of the disease.

"The symptoms are essentially of a catarrhal nature. We find most frequently marked cold in the head, with considerable discharge from the nose, and, sometimes, epistaxis; redness of the conjunctiva, with abundant lachrymation; catarrh of the mucous membrane of the throat, larynx and bronchi; also, sore throat, difficulty of swallowing, hoarseness, tendency to cough, and a burning or tickling sensation in the throat. The mucous membrane of the cavities of the nose, mouth and pharynx is generally found reddened, and the tonsils swollen."

Comparing these symptoms with what we find in intermittent fever, one can not but be struck by the analogy existing between them. Mertz says:

"Masked fevers may, furthermore, manifest themselves in the form of intermittent hyperemia, hemorrhage, edema, and inflammatory disturbances of nutrition. Among the latter are typical coryza, bronchial catarrh, swelling of the tonsils, * * * hemorrhages from the nose, the lungs, * * * furthermore, typical iritis and ophthalmia."

Farther on he says:

"Aside from the cases in which a pre-existing bronchitis, pneumonia, or pleurisy, is aggravated in its symptoms, or modified in its course, by an intercurrent malarial fever, it also appears possible for such a fever to localize itself in the bronchial tubes, the lungs, or the pleura, and there call forth manifestations in no degree inferior to those of the genuine diseases of these organs. We may thus meet with a sudden outbreak of hyperemia of the bronchi, in which the patient * * * suffers from the most intense anxiety and constriction of the chest.

"More interesting than these, however, are the cases of *intermittens perniciosa pneumonica and pleuritica.*

"During the chill and the hot stage, the patients are seized with dyspnea; they cough much, without expectoration, and complain of the most violent pain in the breast * * * dullness on percussion and increased vocal fremitus, are manifest; while auscultation reveals, at first, crepitant rhonchi, then bronchial breathing and bronchophony. During the sweating stage a decided remission of the fever takes place, as well as an abatement of the symptoms, subjective and objective, which may almost entirely disappear during the intermission that follows. In case of a renewed paroxysm, however, of the quotidian, or tertian type, these symptoms will recur. The infiltration will now increase somewhat in extent, and remain stationary during the intermissions."

Returning, now, to influenza, we find, according to Zuelzer:

"At the very beginning there sets in a very tormenting, convulsive, dry cough, which becomes paroxysmal, especially in the evening and at night, not infrequently leads to vomiting, and often leaves behind it pains in the respiratory muscles. The sputa are very scanty and muco-serous. In less frequent cases they become more

abundant towards the end of the disease. * * * Auscultation frequently reveals sonorous, or in places, crepitant, râles, as in the case of non-epidemic laryngo-bronchitis; still, there also occur cases in which all the auscultatory phenomena are very insignificant, or absolutely wanting. According to Graves' view, they sometimes occur with intermittent, or rhythmically returning, remissions * * * With many patients these phenomena go on to great oppression, marked dyspnea, pain in the precordia, etc. Pleuritic stitches, too, and pain under the sternum are observed without any appreciable physical changes. In certain epidemics these suffocative states are rather frequent."

In intermittent fever it is stated also by Mertz:

"* * * In persons predisposed thereto, especially those who suffer from frequent congestions of the lungs, or give evidences of scurvy, the most violent pulmonary hemorrhages may ensue * * *"

As compared with this in influenza, it is stated by Zuelzer:

"In phthisical, and also in full-blooded persons, they (the sputa) sometimes contain an admixture of blood."

That the bronchitic inflammations in intermittent fever are by no means rare is shown by the statement of Mertz, further on, in his analysis of the individual symptoms, that:

"* * * simple intermittent fever is sometimes accompanied by attacks (either sporadic or in some degree epidemic) of bronchitis, with dry or moist rhonchi, cough and dyspnea, which arise during the cold stage, diminish gradually during the stage of sweating, and disappear entirely during the intermission. They undoubtedly depend upon hyperemia of the lungs, with swelling and excessive secretion from the bronchial mucous membrane."

The Gastric and Intestinal Mucous Membranes.—In influenza Zuelzer states:

"The mucous membrane of the digestive organs is, likewise, affected in many cases, although generally not to so high a degree. Loss of appetite, increased thirst, a coated tongue, a bad, pasty taste, sensitiveness of the epigastrium, and, not infrequently, colicky pains and diarrhea, or nausea and vomiting, accompany the disease. In other cases there is persistent constipation."

In intermittent fever, Mertz says:

"The patient feels a sensation of fullness and tension in the epigastrium, is obliged to draw deep inspirations, complains of nausea, and often actually vomits. The taste is stale, bitter, often metallic, rarely acid. * * * At the same time there is loss of appetite, repugnance to animal food, a foul breath, constipation or diarrhea, and considerable thirst." Professor Mertz treats, at some length, of the choleraic form of intermittent fever.

Inasmuch as the symptoms in this form, "which is of quite frequent occurrence," are identical with those of so-called Asiatic or, as the author quoted naively terms it, "real cholera," it would seem self-evident that they are essentially, unequivocally, and without a particle of doubt, one and the same thing.

What better description of cholera can be drawn than the following in this form of intermittent fever?

"* * * Intermittent fever may assume a pernicious character, by virtue of other alarming symptoms. Under this head comes the choleraic form of the malady, which is of quite frequent occurrence, and in which burning thirst, severe vomiting of yellowish matter, and greenish, diarrheal passages appear during the continuance of the fever; the passages from the bowels becoming more and more watery, and sometimes resembling bloody water. Subsequently, just as in real cholera, general oppression and the most tormenting precordial distress are felt; cramps in the calves of the legs, coldness, and a livid appearance of the skin follow, with a small, hardly perceptible pulse, sunken eyes, and a true Hippocratic countenance. Convulsions are not infrequent. Death supervenes, with all evidence of asphyxia. Another variety, which bears a striking resemblance to the foregoing, is that known as *algid intermittent*, characterized by a coldness of the body like that of marble, while the temperature in the mouth is from 86° to 88° F., and that in the axilla, 84° F.

"The attack begins with the usual chill, which is not of abnormal severity or duration. It is not until during or after the hot stage that the patient grows cold,

while at the same time he complains of burning heat within, and of thirst; the skin turns pale and livid, is stiff and covered with a cold sweat, the pupils are dilated, the eyes expressionless, the lips blanched and dry, the tongue smooth, pale and soft, and the region of the stomach sensitive. Mucobilious vomiting is liable to occur, with occasional greenish-yellow stools, though both of these may be absent, and are of subordinate importance. The urine is scanty, high colored, turbid, of high specific gravity, and free from albumen. * * *" Upon this freedom from albuminuria depends, to a very great extent, according to some authorities, the diagnosis of algid intermittent from cholera. And yet, illogically enough, that special form of intermittent, "called by the French, from its prominent symptoms of a billious condition, and bloody urine, *fèvre bilieuse hématurique*," is recognized as a true intermittent!

Why albuminuria should exclude the one and hematuria not exclude the other is, I must confess, a little beyond my comprehension. However, it is to be taken simply as only one of the many inconsistencies in the history of epidemic disease, evidencing a rather unsystematic method underlying their investigations.

Continuing the description of the algid form, Mertz says:

This form of pernicious malarial fever is usually confined to warm countries, and is, as a rule, preceded by some paroxysms of simple intermittent. Even in these simple paroxysms, however, according to Rigler, there is an unusual prostration, reaction is imperfect, and the coldness of the face and extremities during the paroxysm is striking. It is said that these attacks may terminate in spontaneous recovery; usually, however, death takes place, either in the first attack, or, if they are repeated, in the second to the fourth. Recovery follows through a reaction, like that from cholera; it is not unusual, either, to find a typhoid condition supervene, like that after cholera.

Now, in comparing this choleraic form of intermittent fever with influenza, it will be found, on close investigation, that the symptoms in both are almost identical, not, it may be admitted, in degree of severity, but from an anatomical and pathological standpoint.

As I pointed out in a previous article, the chronological order of symptomatic happenings is simply transposed, this transposition being readily understood when viewed in the light of chemical and electro-chemical laws, to which the human body is subject.

If the patients withstand the first onslaught of the profuse diarrhea, we find the following:

"Congestions frequently occur in the head. The face, under these circumstances, is reddened, but unequally, so that it has a spotted appearance. The eyes are congested and lachrymose. Most patients complain of a fullness and heaviness in the head, or of a dull headache, either general in character or seated in the forehead or occiput. Roaring in the ears is frequent. Notwithstanding a certain tendency to somnolence, the most enfeebled patients are usually sleepless. * * * In a still later stage the so-called cholera eruption shows itself. This eruption is, at one time, of erythematous, at another of urticarial character, or it may show a roseola-like appearance."

This sequence of symptoms is simply a reversal of the order of procedure that maintains in influenza, that is, to a certain extent. Thus, after the occurrence of the coryza, the bronchial symptoms, the ordinary gastric and nervous symptoms, etc., we find it stated by Zuelzer:

"In 'uncomplicated' cases the disease generally ends in recovery * * * it generally terminates critically, either with sweat or epistaxis, abundant diarrheal discharges, or increased secretion of urine."

Even the eruptive features of cholera are duplicated in influenza. Thus:

"The statements of the earlier observers about the complications of influenza with exanthemata, such as miliaria, roseola, urticaria, petechia, scarlatinal spots, erysipelas, etc., seem to refer, as Biermer assumes, chiefly to miliaria and urticaria."

We find all these duplicated in intermittent fever, so that what is said concerning the identity of nine-tenths of the symptoms of cholera with influenza, can be reiterated most emphatically with re-

gard to influenza, as compared with intermittent.

The vast majority of the symptoms in both of these diseases; in fact, not alone in these, but, likewise, in cholera, relapsing fever, typhus, and a host of others of this class, exactly coincide, showing conclusively that there is a common, basic ground-work upon which they are all constructed. Consequently, if such be the case, it is logical to assert that the causative factor of these common basic phenomena must be the same in all these manifestations of epidemic disease.

Being obliged, by lack of space, to curtail this necessarily brief comparison of influenza and intermittent fever, I shall leave to a future paper the consideration of still more striking analogies existing between them.

668 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

Rectal Diseases—the Bete Noire of the Physician.

BY HOWELL B. GWIN, M. D.,

Nashville, Tenn.

II.

My first article dealt, in general and briefly, with hemorrhoids, which I believe to be by far the most common of rectal diseases. My next article will be largely devoted to the treatment of hemorrhoids. Attention is now called to several leading forms of rectal diseases.

By way of parenthesis, we must clearly apprehend the meaning of the word "tumor." Literally it is a swelling, and is employed in the description of various rectal affections. Tumors are of two kinds, benign and malignant; the benign are usually curable, the malignant usually incurable. Consider, first:

Fistulæ.—These appear to be due to abscesses, deep or superficial, and, after rupture, there is burrowing into and through neighboring tissues in single or combined lines or sinuses. A small minority of fistulæ are nonprogressive, but the overwhelming majority are progressive, becoming more and more fraught with evil and danger. Abscesses arise in several localities: (*a*) Far up in the ischio-rectal fossa; (*b*) below this, in the superior pelvi-rectal space, and (*c*) on the margin of the anal orifice. Abscesses are more frequent in the loose connective tissue, and are caused by inflammation, bruises, wounds, etc. A fistula may not always open into the rectum. Sometimes a stricture of the rectum will cause an abscess issuing in a fistula. Both the stricture and fistula must be treated. To treat one without the other is unscientific and nugatory. A charlatan will apply a cautery, or inject strong acids, and pronounce his patient cured, but the last state will be worse than the first. A fistula will lengthen its fearful and fatal burrowing in several directions, and it is the grossest malpractice to close prematurely its openings, thus driving within the poison through several sinuses. In many cases, in order to effect a complete and healthful drainage, the common-sense treatment is surgical; the fistula must, therefore, be kept open, even if frequent probing be employed. The cleansing and healing of the sinus is the problem of the practitioner, who should never excoriate the sensitive membranes by the use of the cautery, caustics, escharotics, acids, etc.—this would be to undo the preparatory work of the surgeon. The necessity is the rebuilding of the tissues without the slightest injury, and, from the first, the treatment should be non-irritating, analgesic, antiseptic, and absorbent; in short, reconstructive.

I do not lay much stress on the so-called varieties of fistulæ, such as complete, blind external, blind internal, etc., for these are but stages in their progress, which do not materially affect the treatment.

Fissure.—This has sometimes been called an "irritable ulcer of the rectum," but this is not a clear-cut definition. An ulcer or tumor may be a concomitant, but the fissure is distinctive. As its name imports, it is a crack. Primarily, and in most cases, fissure of the anus is a lesion of the mucous membrane only, though the submucous and even muscular tissues may be involved in old cases. The lower end of the fissure is usually just within the margin of the external sphincter, though sometimes it is found higher up, and may exist on either or both sides of the bowel.

In appearance it resembles the crack in a lip resulting from what we call chapping; not healing readily, it soon passes into an ulcer. It may be an eighth of an inch wide and a quarter of an inch or more in length. To repeat, an abscess or ulcer producing a small tract or sinus will exhibit characteristic symptoms of a fissure.

On its inception, there is not much severe pain; its advancing steps are marked by smarting, stinging, aching, throbbing, burning or lancinating sensations, becoming, finally, almost intolerable. Generally this pain is not much felt in the act of defecation, but within half an hour or more it sets up, becoming sharp and cutting, then for a while may subside—a condition guiding one in the diagnosis of fissure. A skillful surgeon will tell you that a typical fissure is the most painful of all diseases he is called upon to treat, but he will also tell you that it is more easily cured than some other rectal diseases.

Some insist upon an operation. I do not affirm that an operation is contra-indicated in extreme cases, but I do insist that this disease is curable without the knife; indeed, I can say that the majority of cases coming to me have been cured without the knife, and without the cautery, and strong acid fluids and salves. This was not my experience for many years, for I blindly followed methods of treatment that have descended traditionally *ex authoritate*.

Here let me say that I value the experience of men more than their theory. It is easy to twist facts to confirm a preconceived theory; it is scientific to gather all facts and thread them with a co-ordinating principle, and this, indeed, is the Baconian method which has almost created the science of modern times. I urge more independence of thought and action to induce a physician to think for himself, which is always a prophecy of power. Let him not lose his head or sacrifice any fact established by science. Let him, also, realize that science has never finished its work, is always progressive, and that the honest, independent student is the chief factor in all discoveries and inventions. Such a man is a benefactor and the hero of to-morrow, whatever may be the record against him to-day. My readers have discovered my aversion to the knife. I believe that many persons have had their health wrecked, while others have lost their lives by the reckless use of the knife, illustrated, for example, in ovariotomy, as well as many other diseases.

It is not my purpose to give well-known details, though advising that these be studied independently by the practitioner, who, shunning the bondage of traditionalism, should gather all facts for his diagnosis and therapeutics. In concluding this article I make brief reference to other, not all, rectal diseases.

Polypi sometimes make their appearance in the rectum, as in the nose, vagina and uterus. They are not common; they sometimes spring from a false treatment of hemorrhoids by acid injections. A polyp has a pedicle on the mucous membrane, though this is not pathognomonic; it is usually small, appearing sometimes soft, sometimes hard, occasionally attended with bleeding. Its irritation may cause ulceration. It is sometimes complicated with fissure, fistula, or hemorrhoids, and when these are treated the polypi should be carefully observed and removed by the simplest method, which is to ligate them, and sometimes to cut them off near their connection. The after-treatment of the mucous and other membranes must be judicious and complete, in order to avoid, if possible, the recurrence of the polypus. Again, it will be seen that I carefully avoid scarifying living tissue.

Ulcers.—These are of so many varieties, and so often connected with other rectal diseases, I need not detail their character and effect. As a rule all purulent matter should be discharged, and on account of location and probable complications, the tissues should be purified and healed by remedies that leave no injury. Just here I would parenthetically add, that cancers are not now under consideration, nor any disease which may be transferred to any part of the body by metastasis.

Pruritus ani is sometimes a concomitant of other diseases, but, strictly speaking, it is an independent disease, which may be constitutional or local. It appears to be neurotic, is attended with little pain, but intolerable itching, and is most difficult to manage and to cure. As terminal

nerves are the most important factor in this trouble, they, with all reflexes to other organs, must be carefully looked after. The cuticle, converted into scarf-tissue, must be destroyed to obtain a cure, and while the rectal specialist is called upon to treat this disease, he should be thoroughly acquainted with dermatology. It is his province to discover rectal complications and control them, but in treating a typical case of pruritus ani we must necessarily use the best remedies of the dermatologist, and hence a constitutional and local treatment, co-operating, will bring the best result. The habits of the patient, in this and all rectal diseases, must be looked after, proper hygienic measures enforced, and a proper diet used, while, of course, we should avoid the use of intoxicants and stimulants; warning against alcohol, tobacco, excessive sexual indulgence, and other dissipations, as well as against morbid mental states arising from the perplexities of business or otherwise.

Prolapsus Ani.—This is the protrusion of the mucous membrane of the bowel, occurring with children, with women who have borne many children, and with men as well. In the adult it may be due to several causes, such as constipation, diarrhea, enlarged prostate in the male, polypus, piles, etc., and sometimes to a strumus or syphilitic cause. The usual treatment is palliative and surgical. Here, again, I will say that while in extreme cases I would not obstinately reject surgical treatment, I do honestly believe that the persistent use of a palliative or, rather, reconstructive remedy, will yield the best results. In treating prolapsus it is necessary to see that the nourishment is proper, and the blood normal, and that the morbid condition of the stomach, bowels, liver, bladder, etc., is removed. In some cases tonics and aperients will be necessary. But, the supreme aim of the physician should be to replace and reattach the mucous membrane to the internal muscular membrane. I have been greatly gratified by the cures permanently effected by my non-use of the knife or of escharotics, and by the steady use of reconstructive remedies. I do not deem it necessary to speak specifically of cancer, neuralgia and stricture of the rectum.

Without hesitation I have presented fundamental facts and principles expounded by accepted authorities, for there is no progress except from the known to the unknown, yet truly there is no *ultima thule* in any science realm. Sight, insight, and foresight, profound and unremitting, are necessary to progress. Woe to the man who is paralyzed by an obstacle! He is the antitype of the ass, of whom Horace speaks, that "stood by the river's edge waiting for the water to pass before he would cross." I claim for the medical profession a larger personal liberty, a wider vision, a more fraternal spirit, more independent conviction and research, and a more progressive application of facts and principles, and less of organized espionage and syndicated policies.

After the manner of my last article, I desire to ask a few questions. Brother Physician, have the old crystallized methods of treating rectal diseases given you and your patients satisfaction? Have you not often asked yourself whether there does not exist in the realm of the unknown remedial agents to overcome the obstacles that baffled you? or whether among agents already known there may not be new curative combinations? Are you thinking and searching for a remedy and are you willing to accept without distrust or prejudice new, rational remedies? Has the time arrived when you are willing to break the fetters of a narrow and wornout code or system which virtually bids you to sneeze when others take snuff? No answers to these questions are asked for—you are simply urged to think!

In my next and closing article I will deal specially with the treatment of rectal diseases.

[Written for the MEDICAL BRIEF.]

To the Medical Profession.

BY ELLA A. JENNINGS, M. D.,
Brooklyn, N. Y.

Thinking my case may interest medical men and women, I hereby submit a synopsis of it:

For twenty-eight years I was actively engaged in the practice of medicine in New York City. In the spring of 1904 I met with a serious financial loss, greatly

aggravated by the circumstances attending it. For some months I was overwhelmed by grief, loss of sleep, loss of appetite and interruption of the bodily functions.

On January 15, 1905, I had an attack of heart failure while ascending the elevated railroad stairs; was assisted home, and called Dr. Simpson, of One Hundred and Fifteenth street, a specialist in heart troubles and the nervous system. He came four times in four hours, and told me "there was no hope for me; that I was liable to die any moment with angina pectoris; that medical skill was unavailing."

The agony of the spasms was indescribable. For over sixteen hours I pumped the heart by pressure of the hands. The sensation was a smothering or drowning in your own blood. At 6 a. m. I had the New York Medical College and Hospital for Women telephoned for accommodation, and requested them to send a physician for me at once. Upon my arrival I said: "I want the best woman physician you have, and she must understand the right remedy, and if she is not here in half an hour, I'm a dead woman." Was undressed, put to bed, and immediately relapsed into unconsciousness, and slept sixty-two hours. Remained in the hospital for three weeks, and went home.

In April had another shock to my nerves and heart; the spasms recurred, and from 2 A. M. until 11 A. M. they were almost constant. Cardiac dyspnea set in, and the difficulty of breathing greatly augmented my suffering. It was agonizing. During the year I consulted some twenty eminent physicians of both schools; few of them offered me the least hope; some said: "I was liable to die any moment; the climbing of one flight of stairs might stop the heart beating."

One physician, a specialist of repute, told me "it was a very bad case of nervous angina, and that three years' rest would restore me to health." Others were certain it was organic, and hopeless.

I refused to accept their verdict. A heart that had served me faithfully for over half a century could not so suddenly go wrong. I had lived so careful a life; never taking any stimulants; not even coffee, and tea only in small quantities and occasionally, and always observed sanitary measures, baths, diet, physical culture, etc.

One doctor advised twelve-year-old rye whisky in small doses. Found benefit from the Nauheim baths, also Emile Batchelet's magnetic generators. Went to Ocean Grove, N. J., and found the air, quiet and restfulness of the place a great benefit.

In October, 1906, took an apartment and resumed practice; felt pretty well; mind hopeful; courage and strength returning. October 12, 1906, a sister's death, under very sad circumstances (self-induced by morphine through melancholia), gave me a shock that brought a return of the heart spasms and dyspnea and suspended the functions of some of the organs. The liver ceased to contribute the necessary bile, and the stools were the color of chalk; the stomach refused to digest the food; it passed through the alimentary canal, undigested, fermented and foamy, like yeast. The pulse seldom below one hundred and forty; sleep not more than one or two hours in the twenty-four. Dyspnea prevented a recumbent position, so distressing as to make life a perpetual burden, and death a desired release. Mental depression and sadness had replaced an unusually cheerful and happy nature. Kidneys secreted very little; urine of a dark color, and where I had usually passed three pints in the twenty-four hours, I seldom voided more than six to twelve ounces in the twenty-four hours, sometimes even less. Face had an expression of anguish. In January, 1907, had a severe congestive chill, and dropsy set in; feet and legs were swollen to three times their normal size. Called the same physician, who had probably saved my life at the hospital; she prescribed kali carb., and the dyspnea was greatly lessened for a time. She urged my going to California at once. Kidney, stomach and liver troubles continued. For the first time in nearly three years of my illness I began to lose hope; felt that hydrotherapy might help me. Called up Dr. Simon Baruch, and learned they did not receive patients only for daily treatments. I wanted baths, diet and nursing.

On March 5th I went to Miller's Hotel and bath-house; spent five days, and grew

rapidly worse; the dropsy ascending and increasing steadily. Dr. Miller, believing my case as likely to terminate fatally any day, requested my sister to remove me. I then made application to another sanitarium, where they gave the water treatment; their physician reported my case adversely as "too far gone to recover." While waiting for their decision, I recalled Dr. Shepard's sanitarium, in Brooklyn, and had Dr. Miller's secretary phone to see if I could have a room there. There were no formalities as to liability to die, no physician's examinations to see if I were a safe risk, but the reply came: "Dr. Jennings can come right over; we have a room." Thank God; death was not a crime in the doctor's sanitarium. Dr. Miller sent his secretary with me, thinking I might die en route.

Dr. Shepard first introduced the Turkish bath in this country some forty-four years ago; is eighty-two years old; has absolute faith in his methods, which are baths and fasting, sweating and starving out the disease. He is not afraid of moribund cases, and has snatched thousands from the grave, and worse still, the hopeless despair of disease. He looked me over, took my pulse, one hundred and twenty-five; looked at my tongue, and said quite cheerfully: "You are pretty sick, Dr. Jennings, but I guess we can pull you through if you are willing to take the medicine." I replied: "I can not take strong drugs; never have, and can not even to save my life." He put me on a strict water fast, with a little lemon juice (but no sugar), for six days, a daily Turkish bath and a light body massage. This was my regimen for the first six days; the next four days, three oranges, and water, if thirsty, and a subsequent four days, boiled onions once a day to eliminate the impurities of the system. Was very hungry on the thirteenth and fourteenth days, and so ravenous on the fifteenth day I insisted on some food. The doctor had designed to keep me thirty days without eating, or until my pulse had decreased to normal. The doctor is rather heroic along these lines, and believes that only by abstinence and rest that a stomach regains power to digest and make good blood from good food. Before going to Dr. Shepard's I had not lain down in nearly three months, except for an hour or two; had to rest in a Morris chair. The cardiac dyspnea was constant; my feet and ankles swollen to three times their natural size; my mental condition one of hopeless despair and longing for death. Had not slept upon my right side or back in three years; no appetite; unable to digest even hot or malted milk. After the first bath the dyspnea was greatly relieved, I could lie down; after second bath it had disappeared, and upon the fourth day the dropsy had vanished entirely. After fifteen days of abstinence, I had a chop and some educator crackers, and never did food taste better.

I have been here for six weeks; sleep like a child; am getting strong; can walk two miles without fatigue; feel comfortable and satisfied with one light meal a day at 1 P. M., consisting of soft boiled egg or a chop, with spinach and celery, or water-cress, onion, lettuce and brown bread and butter. Have learned much along the dietetic lines, and regard my stay here as the most valuable experience of my life. Doctor says that I ought to give myself at least six months' rest to get well, but women physicians have no tobacco, beer, whisky or other bad habits to overcome, and so rebound more quickly. My pulse is down to seventy for the first time in three years, and I feel really well and strong, but have agreed to keep the brakes on so as to have a relapse. The baths and massage are delightful, refreshing, and the twenty-two pounds I have lost are a gain. Lost eighteen pounds the first two weeks; some of it being the dropsical effusion. Passed four to six quarts of urine daily for eight days. Mental depression gone; cheerful, happy, hopeful, and feel that life is once more a joyous thing. Am perfectly willing to confine myself to one meal per day, if health can thereby be secured. The pleasures of the palate are as nothing compared with pain and suffering of unwise or overeating. If my case aids any of my fellow physicians, I am amply repaid.

I feel assured that many of you will rejoice that so simple and effective a cure can be made life-saving in so formidable a disease as angina pectoris and cardiac asthma and dropsy.

81 Columbia Heights.

[Written for the MEDICAL BRIEF.]

Diphtheria: Is the Prevailing Antitoxin Treatment Only Another Medical Delusion?

BY CHARLES E. PAGE, M. D.,
Boston, Mass.

Demonstration fails to change established beliefs.—HERBERT SPENCER.

Upon *a priori* grounds, every sensible person would be likely to say, off hand, that a diphtheritic patient's blood is sufficiently charged with filth without injecting any foreign substance, and, least of all, the serum of the blood of a poisoned horse. The attempt will herein be made to produce facts and figures such as will tend to induce all intelligent men, in or out of the medical profession, to oppose the employment of antitoxin on *a posteriori* ground that it is a true toxin, instead of what its name would imply.

"You could have knocked me down with a feather," is an expression often heard, and the meaning of which we all understand—a sudden weakness arising from some emotion, as fear, surprise, etc., lowering the individual's power of resistance to force from without. It is the writer's belief, based on many years' observation in active practice, that fatalities are constantly occurring as the direct and natural effect of so-called medicinal doses of virulent poisons. To weak and exhausted patients the smallest dose of poison may prove as deadly as the heaviest amount administered to a healthy person for homicidal purpose. The stupid phrase, "heart failure," covers a multitude of sins against life and common sense.

"It was a brilliant operation, but the patient—died," and this result has often happened in cases in which no surgical treatment was called for, if only the physician in attendance had understood, and had been skilled in administering hygienic treatment, including, of course, hydrotherapy, with its almost endless devices for relieving internal, as well as external lesions. "Died cured," is a phrase descriptive of two cases treated by one of our leading hospital doctors, when he was beginning his career. They were cases of heart disease, and he cured both with digitalis. "The triumph seemed complete," he said, before the Harvard Medical School Association, "and so it was for weeks; but, mark the ultimate result. Mary, one morning, as she trod the doorway of the market-house, fell dead upon the threshold. The banker, some weeks later, stretching his arm across the desk that had been to him the pathway to riches and power, fell hushed and powerless into the eternal silence."

The recollections of the teachings listened to in his medical course, sends a cold chill along the writer's spine, particularly as he is aware that most of the other young bumpkins swallowed the whole business, "hook, line, bob and sinker," and have for a generation been "practicing" on the principle—for this is about what it amounts to—that what is bad for the healthy is good for the diseased; that known poisons, which tend to make a well man sick, or to kill him, tend to make him well when he is sick! It is this which fully accounts for the rise of the mental healer, the "scientist," the faith-cure, etc. If these do nothing to help the organism in its emergency—in its efforts to eliminate the disease-producing matters—they, at least, do not add to the already over-poisoned condition, and to that extent nature has a fair chance to restore "that just balance which we call health."

There are to-day more physicians who have practically abandoned the use of potent drugs than at any former time, but it is still true that the chief reliance of nine hundred and ninety-nine out of a thousand of all so-called regular physicians, is drugs, and especially alcohol in some form. And this in face of such evidence as may be found in the experience of one of the foremost physicians in the world, and his entire staff, in one of the chief hospitals in England. The late Sir B. W. Richardson, of the London Charity Hospital, stated that of late years very little medicine had been used, and not a drop of alcohol, in any form, had been given to patients at his hospital. Neither acute nor chronic diseases have been treated with alcohol in any measure, and the mortality has been less, disease for disease, than at any hospital in England.

If it can be truly said of alcohol, the one drug poison most extensively employed

by physicians of all schools, and in almost every form of disease, that it is always harmful, and tends to lessen the chances of any sick person to get well—and that is precisely what is meant by Dr. Richardson's experience and testimony—what further need be said in condemnation of all poisons in the treatment of sickness?

Antitoxin treatment for diphtheria! What can be said in praise of it? Dr. Carl Strueh, of Chicago, in "Criticism of the Antitoxin Treatment from a Different Standpoint" (*Journal of the American Medical Association*), and "Once More on Antitoxin," after a careful analysis of an immense array of statistics, shows very clearly two things, viz.: first, that the statistics are very misleading, since nowadays almost every kind of sore throat is assumed to be diphtheritic, and a rush is made for the antitoxin doctor, and, therefore, a vast number of simple cases, such as always recover, even with no treatment whatsoever, are set down to the credit of the serum treatment; and, second, that the virtues of the antitoxin method are altogether negative—that is, in taking the place of a worse treatment the patient is given a better chance to recover through the efforts of nature.

Dr. Strueh says, concerning injections made for prophylactic purposes, that "we must agree that it is not the rule that from one child being sick with diphtheria the majority of the family becomes infected. If we, therefore, apply antitoxin to every member of a family in which there is a case of diphtheria, we can wager ten to one, of course, that the result will be in favor of antitoxin. The followers of the antitoxin treatment declare that it is necessary, in order to get the best results, not to combine any drug treatment, and right here, as it seems to me, is the root of the whole matter. I do not call it logical to describe the decrease in the mortality exclusively to the antitoxin treatment, and not to pay any attention to the possibility that the exclusion of other drugs might have something to do with it. This point ought to be investigated first, for we can not deny the fact that the animal serum is more related to us and less harmful to the system than the chemicals are, and it is logical to conclude that the exclusion of the greater evil must have a favorable effect on the mortality.

"Every physician knows that there are a great many cases which change for the better quite unexpectedly," says Dr. Strueh, "and I am sure that this fact has a great deal to do with many a brilliant result of antitoxin treatment. An illustration of this view I lately received from a brother physician and enthusiastic believer in serum-therapy. His sixteen-year-old boy became suddenly sick with high fever, swelling of the maxillary glands, difficulty in swallowing, and thick coating of the tonsils. The doctor obtained some antitoxin late in the evening, but postponed the injection until the next morning, when it was no longer necessary, the boy being practically well. The fever was gone, the maxillary glands were painless and had greatly decreased, and the membrane was almost gone. The case would have been taken as a convincing proof of the efficiency of antitoxin, if it had been injected; on the other hand, it might have turned the tide against recovery. Similar cases are certainly in the mind of every physician."

In our experiments on animals, in injecting various "cultures" directly into the circulation, there is always more or less disturbance of the system, and, not infrequently, serious disease. Even so pure and precious a substance as saliva, which is secreted from the blood by the salivary glands, a fluid so useful in the first stage of digestion, and which passes harmlessly into the stomach in considerable volume; even this fluid, when injected directly into the circulation in the way that antitoxin, so called, is employed, causes considerable disturbance, and, in some instances, a fatal result. The difference between a mild form of disease and a fatal one in these cases is, doubtless, a question of the differing conditions of the subjects, some having greater power of resistance to disease-producing causes. The same principle applies in the matter of vaccination, and in the injection of antitoxin. It is only a rare occurrence, for example, that vaccination causes the death of the subject; it always produces considerable physical disturbance, feverishness, more or less severe local inflammation, etc.; whereas, a much larger

amount of the virus might be taken into a healthy stomach, along with or without food, and no sign of disorder result, the gastric juice being about the most powerful germicide and disinfectant known. Whatever the local or general immediate effects of this procedure may be, the remote evil effects none of us can ever, with any degree of certainty, predict. However, no matter how one may regard the procedure of injecting vaccine virus, or antitoxin, into the blood of any one, well or sick, surely no one would ever dream of calling it a hygienic measure. It must, on general principles, be held as in and of itself unhygienic, and it will, doubtless, be the final conclusion of all scientific men that, upon the whole, we had better pin our faith to hygienic rather than unhygienic treatment, whether for prevention or cure.

It has recently been suggested by a physician, a believer in the antitoxin scheme, that a law be passed making punishment for certain crimes optional with the convicted—either imprisonment or inoculation with certain disease germs—for, as he maintains, antitoxin should be produced from human beings, and not animals. He remarks that "this would solve the problem for all time." A newspaper writer remarks that it might also introduce a few new problems. We might ask what would be the matter with trying it on the doctors themselves? For myself, I make use of no medicament or procedure that I would not feel perfectly safe in applying in my own person or that of any dear member of my family, sick or well. On the other hand, nothing could possibly ever induce me to inject either the virus of cow-pox or the serum of the poisoned horse or criminal into the circulation of my enemy, even, for I am not of a revengeful disposition.

W. R. Hadwen, M. D., L. R. C. P., M. R. C. S., etc., an eminent British physician, is the author of a book, now in its fourth edition, treating in an entirely impartial way the question of the antitoxin treatment for diphtheria. The statistics are taken from the Registrar-General's Returns, and are very interesting and, as it seems to me, convincing. We read:

"Taking the mortality returns for the ten years antecedent to the introduction of antitoxin (1885-1894), we find, on comparing them with the ten years subsequent thereto (1895-1904), that the former period shows a mortality from diphtheria of only two hundred per million persons living, against two hundred and thirty-five in the latter. Throughout the whole decennium, from 1871-80, the average mortality per million persons living, from diphtheria, did not rise above one hundred and twenty-one. No such low mortality is seen throughout the whole antitoxin period, from the date of its introduction ten years ago, until the present time."

Diphtheria is shown to be an epidemic disease. It comes and goes, as epidemics do. "A decline set in in the year 1894, that is, twelve months before antitoxin was introduced into this country (England and Wales), the total diphtheria mortality of that year being eight thousand seven hundred and seventy-four; in the year 1896 (when antitoxin was in almost universal use) the mortality again rose to eight thousand nine hundred and ninety-three, and, although in the two following years a slight reduction occurred, yet it again rose in 1899 to the heavy total of nine thousand two hundred and five, and in 1900, that is five years after the introduction of antitoxin, the mortality had reached nine thousand three hundred and forty-five—the highest year but one upon record."

"To say, in the face of these figures, that antitoxin has rendered diphtheria 'a harmless disease,' as has been repeatedly asserted by medical apologists who have never studied the subject, is to deliberately seek to blind the eyes of the public to the actual facts, and to mislead the profession as to the true causes of the disease. Until those causes are fairly faced and investigated, and the medical mind diverted from the hallucination of the antitoxin fetich to the contemplation of more solid and scientific methods, we must go bungling on with ever-recurring epidemics, oblivious to the lessons which they emphatically teach. * * * It is not by adding disease to disease that the evil of diphtheria will be combated, but it is by the removal of the dark, damp, ill-ventilated slums which infest our towns and cities; by letting light and air

into the over-crowded and unsanitary dwellings of the poor, and by the inculcation of lessons of cleanliness and hygiene among the people."

Right here at home we have evidence that to befoul the circulation with the serum of the blood of a poisoned horse is what we would naturally expect, unwholesome for sick or well folk. Two brothers, law students at Boston University, a freshman and a senior; the younger man was taken ill with some throat symptoms, was given antitoxin, and was dead within forty-eight hours. The brother who had slept with him was given the drug for prevention. His heartbeat dropped below fifty in short order, and his condition was so depressed that the doctor didn't dare give him any more. "I wouldn't have taken it anyway, if he wanted me to," said the young man.

Ernest Langerhaus, the young son of Dr. Langerhaus, medical director of the Moabite Hospital, in Berlin, was killed in perfect health by an injection of Behring's "immunizing serum!" This sad occurrence has convinced one medical man that this serum is best avoided; but must they all be convinced in this way?

While no one could more than the present writer rejoice over the discovery of a sure and speedy cure for diphtheria, still, believing, as he does, that the antitoxin treatment is unhygienic and altogether irrational, he notes with great satisfaction that already there comes from high sources stern opposition to its employment as a remedy for diphtheria.

Says the *Medical Record:* "A paper of the greatest importance was read at a recent meeting of the Berlin Medical Society by Dr. Hansemann. It carries especial weight, because it is announced by an assistant of Professor Virchow, and his work and conclusions are presumably indorsed by the dean of modern pathology."

Dr. Hansemann came out in flat contradiction of the alleged properties and powers of the Behring immunizing serum. He then proceeded to describe the three qualities claimed for the antitoxin, namely, its therapeutic action, its harmlessness and its immunizing power. He said that the present statistics give an erroneous impression (as already shown by Gottstein, in his recently published pamphlet), as many children suffering from lighter forms of throat trouble are now sent to the hospital to be treated with serum, thus swelling the proportion of "cured" cases, which would, he said, otherwise not be higher than the usual average. He said serum injections could by no means be considered harmless, as affections of the kidneys had frequently followed—in one case more severe in type than had ever yet been observed after diphtheria. And, by the way, the same principle applies in the matter of the Pasteur anti-rabies serum.

An editorial in THE MEDICAL BRIEF says: "We call the attention of our readers to the article on antitoxin, in this issue, by Lennox Browne, of London, the greatest laryngologist in the world. He reviews the subject ably and impartially, and proves by unprejudiced, unperverted statistics, that antitoxin is not, and has never been, of the slightest service in the treatment of diphtheria. We hope every doctor will read the article carefully."

In the article alluded to, which is an exhaustive study of every phase of the question, statistical and otherwise, Dr. Browne arrives at the same conclusions as Dr. Hansemann. He alludes to an article in the *British Medical Journal*, and comments upon a portion of it as follows: "I regret to note that both in the article to which I am referring, as well as in others of less authoritative origin, fatalities from inflammation and arrested secretion of the kidneys, from broncho-pneumonia, and from cardio-respiratory paralysis, are all made to occupy a secondary position as a cause of death, albeit they are all a direct result of the poisoning of the system with the toxines of diphtheria." If such views as these are to obtain, surely the very word "antitoxin" is a misnomer.

The *British Medical Journal* cites two cases of death from antitoxin: The first was reported by Dr. Axel Johanessen to the Medical Society of Christiana. The patient was a boy in good health, who received an injection for preventive purposes. He was taken soon after with a sharp diarrhea, grew progressively worse, and died on the tenth day after injection.

THE MEDICAL BRIEF of June, 1896, says: "Deaths from diphtheria serum are multiplying thick and fast. Since the publica-

tion of the Langerhaus case, Dr. Asch has reported through the *Vossische Zeitung* several similar instances, one of them the daughter of a high Prussian medical official who was ill for three months after inoculation. Death should be always considered among the possibilities where a poison is injected directly into the circulation, and reaches the heart before its virulence has been, in any way, diminished. Diphtheria serum is a poison of animal origin, and nothing else. In the majority of cases, it so rouses the system that it is speedily eliminated, but where the heart is congenitally deficient or weakened by a septic disease, the injection of the serum is a most dangerous procedure. Such benefit as may be derived from the antiseptics it contains can not count against the very real dangers lurking in the poisoned horse water."

Another thoughtful physician says: "The major portion of antitoxin's favorable statistics is drawn from cases of diphtheria which 'never went through the formality of occurring.'"

It is absurd to claim that diphtheria is now more prevalent than in former years; that would imply a decline in personal and general sanitation, when we know the reverse to be true. The misleading thing at this time is that about all cases of sore throat are called diphtheritic, and antitoxin is generally employed; hence, the alleged lessened per cent of mortality, though we have to confess that, as shown above, we have epidemics of diphtheria, with more deaths in number since antitoxin than before. It is easy to show how a thirty per cent death-rate is figured out as only six per cent: Say twenty cases of true diphtheria, with eighty cases of more or less severe sore throat; in these one hundred cases six deaths, and called six per cent, when it is really thirty per cent of the actual cases of diphtheria.

120 Tremont Street.

Inclosed find one dollar, the price of subscription for THE MEDICAL BRIEF. I have read the BRIEF with pleasure and profit, and appreciate your efforts to interest me in your practical and valuable journal.—R. J. SMITH, M. D., Chicago.

[Written for the MEDICAL BRIEF.]

All Licensing Boards are Unconstitutional and Void.

BY R. C. BAYLY, A. M., M. D., D. S. T.,
Decatur, Ill.

The Supreme Court of Illinois has decided that the Pharmacy Act of 1899 is void. No person in the State could compound medicines or sell at retail drugs or medicines without a license from the State board.

The act is declared to be invalid on the ground of discrimination. The Court says: "A law which thus invests any board or body of officials with a discretion which is purely arbitrary, and which may be exercised in the interests of a favored few, is invalid. The Constitution of the State says that the Legislature shall never grant to any corporation, association, or individual any special or exclusive privileges, immunity or franchise whatever." The act to regulate the practice of medicine in Illinois has no more foundation, in law, than that of pharmacy. The fact is, no man or body of men can regulate the practice of medicine but physicians themselves. The practice of medicine does not come within the province of legislative authority. And as to the statement by those who put on foot the act that the people asked them for protection against medical quacks, it is false. No legislature was ever called upon to put a tax upon the people for the suppression of quacks. The Legislature of Illinois enacted an anti-trust law, with this proviso: "Penalties against consolidation shall not be held to apply to live stock and agricultural products in the hands of the producer or raiser." Such an exception, says the Supreme Court, in declaring the law unconstitutional, "Is absolutely forbidden by the fourteenth amendment to the Federal Constitution."

The Court further said: "No legislature can divide those in trade into two classes, and make criminals of those in one class while allowing another and favored class engaged in trade to do the same thing with impunity."

The Medical Practice Acts divide practitioners of medicine into two classes, and makes criminals of the one class for doing

that which the other class may do with impunity. In almost every State, one class of physicians is permitted to practice medicine without passing a technical or other examination, appointed by the State. They are simply required to file a diploma with the clerk of the county in which they propose to do business. All who attempt to compete with them on equal terms are made criminals in the sight of the law. Such discrimination, or exception of this kind, is "absolutely forbidden by the fourteenth amendment."

And if a discrimination, or exception of this kind, is "absolutely forbidden in one trade or business, it is, by all rules of legal interpretation, equally forbidden in all trades and avocations." The professional man has never been made an exception to the general rule by the National Government or the United States Supreme Court. The States only have attempted to do these devilish things. On this subject Mr. Justice Field said: "With the adoption of the amendment the power of the States to oppress any one under any pretence, or in any form, was forever ended, and henceforth all persons within their jurisdiction could claim equal protection under the laws. The fact is, and the law is, that no State, even with process of law, shall deny to any one within its jurisdiction the equal protection of the laws."

In 1892, Mr. Justice Harlan, on behalf of himself and Mr. Justice Brewer, said: "I fully concur with Mr. Justice Field that since the adoption of the fourteenth amendment no one of the fundamental rights of life, liberty or property, recognized and guaranteed by the Constitution of the United States, can be denied or abridged by a State in respect to any person within its jurisdiction."

Since the publication of the "Legal Status of Doctors Everywhere Under the Flag," quite all the courts have decided that the position therein declared is correct whenever the gross illegality of the Medical Practice Acts have been adjudicated; and it is confidently believed by all thinking, free people, who are sufficiently educated on the subject, that the tax-payers of the States will put a stop to all legislation in support of arbitrary State boards that have been established contrary to law and the State Constitution for the support of political doctors who, not having qualifications to make a living by practice, have resorted to political fraud to get bread out of the public crib.

These statements of law and facts show that the so-called Medical Practice Acts and examining boards now in the hands of the men that work them for greed, are a menace to life, liberty and property, and have already ruined hundreds of physicians and their families.

An old doctor, who had practiced his profession honorably and successfully in an Eastern city, undertook to settle in the West, where land was cheap, and there continue the practice for a living, spent what he had, and the medical board of examiners, refusing to allow him to enjoy his professional rights, denied him a certificate, and, as a free, law-abiding citizen under the Constitution and laws, with his wife, in their old days, died for want of the necessities of life. Thousands of doctors have suffered the same way to gratify the pretext of "protecting the dear people."

Examination Questions and Answers Missouri Medical Examining Board.

ANATOMY—Answered by Hansell Crenshaw, M. D.

1. Give description with points of ossification of (a) parietal, (b) frontal, (c) occipital bones and (d) femur.

ANSWER.—This question is fully four times too exhaustive. (a) The parietal bone is a quadrilateral curved plate, having an internal surface, four borders, and four angles. Features of the internal surface: (1) concave surface, (2) meningeal grooves, (3) eminences and depressions for brain convolutions, (4) pachionian depressions, (5) lateral sinus groove. (6) perietal foramen, (7) superior longitudinal sinus groove. Features of external surface: (1) convex surface, (2) parietal eminence, (3) temporal ridges, (4) parietal foramen. Superior border: (1) serrated to join the opposite bone, (2) grooved on its under aspect for superior longitudinal sinus. Inferior border: (1) bevelled externally in front, to be overlapped by the great sphenoidal wing, and the squamous portion of the temporal bone, (2) serrated posteriorly to join the mastoid part of the temporal. Anterior border: (1) external serrations above for the frontal bone, (2) internal serrations below, also for the frontal. Posterior border: Serrated for the occipital bone. Angles: (1) the anterior inferior is

the most prominent, while (2) the two upper angles participate in closing the anterior and posterior fontanelles. Ossification—from a single central nucleus, beginning about the seventh week. (b) The frontal bone consists of a vertical and a horizontal plate, each having an internal and an external surface and border. Features of the external surface of the vertical plate: (1) Convex surface, (2) two frontal eminences, (3) nasal eminence, (4) superciliary ridges, (5) metopic suture. Features of the internal surface of the vertical plate: (1) concave surface, (2) frontal sulcus and crest, (3) foramen ceacum, (4) pacchionian depressions, (5) meningeal grooves. Features of the external surface of the horizontal plate: (1) The ethmoidal notch separates this surface into two orbital plates, (2) the orbital plates are triangular and concave, (3) the margins of the ethmoidal notch present broken ethmoidal cells, (4) the nasal spine projects from the anterior end of the ethmoidal notch, (5) the lachrymal fossæ. Features of the internal surface of the horizontal plate: (1) Two convex surfaces separated by ethmoidal notch, (2) undulations for the convolutions of the cerebrum. Borders—the border of the vertical plate is (1) semi-circular, (2) beveled interually above to overlap the parietal bones, (3) beveled internally below to underlap the parietal bones, (4) thickened at the lower ends to join the great sphenoidal wings. The posterior border of the horizontal plate articulates (1) with the lesser sphenoidal wings, and (2) in the ethmoidal notch with the ethmoid bones. Ossification—from two nuclei at the frontal eminences, beginning about the eighth week. (c) The occipital bone is a curved diamond-shaped plate, having an internal surface, an external surface, four borders, and four angles. Features of the external surface: (1) Convex surface, (2) external occipital protuberance, (3) external occipital crest, (4) superior and inferior curved lines, (5) the foramen magnum transmitting the medulla oblongata and membranes, spinal accessory nerves, vertebral arteries, spinal arteries, and check ligaments, (6) anterior condyloid foramina, transmitting the twelfth nerves and meningeal arteries, (7) the posterior condyloid foramina, (8) the pharyngeal ridge, (9) the condyles. Features of the internal surface: (1) Concave surface, (2) inner openings of all foramina noted on external surface, (3) a crucial grooved ridge for lateral and longitudinal sinuses, dividing the surface into four fossæ, (4) internal occipital protuberance. Borders: (1) The superior borders join the parietal bones forming the lambdoid sutures, (2) inferior borders articulate with temporal bone, and are marked halfway by jugular processes. Angles: These are superior, two lateral, and inferior. Inferior angle constitutes the bassilar process, which is continuous with the sphenoid bone. Ossification—from four centers beginning about the eighth week. (d) The femur is a long bone, consisting of an upper extremity, a lower extremity, and a shaft. Upper extremity: It comprises a head, neck, greater trochanter and lesser trochanter. The head, directed upward, inward, and forward, is hemispherical, and coated with cartilage. It articulates with the acetabulum, and presents a small fossa at about the center of the articular surface for the ligamentum teres. The neck is a strong bar, serving to join the head to the shaft at an angle, approximately, one hundred and twenty-five degrees. Its vertical diameter is greater than its thickness, and it is widest where it joins the shaft. Its junction with the shaft is marked anteriorly by a ridge which terminates above in the tubercle. Posteriorly, the intertrochantic ridge crosses the widest part of the neck. In front of the upper part of this line is the digital fossa. The trochanter major is a large cuboid process surmounting the shaft, so as to overhang the digital fossa. Its outer surface is rounded, and presents an oblique line passing from the upper back angle to the lower front angle. This process presents, also, an oblong anterior surface, a superior border and a posterior border, the latter being the upper part of the intertrochanteric ridge. The trochanter minor is a prominent process situated at the back of the shaft, about two and a half inches below the greater trochanter. (Second appearance of a description of the upper extremity of the femur in this journal). Features of the lower extremity: (1) The cartilage-covered condyles, (2) inter-condyloid notch, (3) articulation with the tibia and patella. Features of the shaft: (1) Cylindrical shape, (2) linea aspera behind, (3) internal and external supra-condylar lines being lower expansions of the linea aspera, (4) glutea ridge and linea quadrati, being upper expansions of the linea aspera, (5) nutrient foramen. Ossification—from one primary and four epithysil centers, beginning in the seventh week.

2. Describe superficial and deep palmar arches, and the brachial artery—giving branches and relationships.

ANSWER.—The superficial palmar arch is a loop, formed by the anastomosis of the superficial branch of the ulnar artery with the volar branch of the radial artery. The convexity of the arch is toward the clefts of the fingers. The junction with the volar artery is just above the cleft of the thumb. The arch in front lies behind the skin and superficial fascia, being crossed from within outward by the palmaris brevis, palmar branch of ulnar nerve, palmar fascia, and palmar branch of median nerve. Behind it rests upon the flexor tendons, muscles of the little finger, and branches of the ulnar of median nerves. Branches—four digital, muscular and cutaneous. A line drawn across the palm level with the cleft of the thumb, roughly locates the arch. The deep palmar arch is a loop, formed by the anastamosis or the terminal branch of the radial artery with the deep branch of the ulnar; this arch is covered by the deep flexor tendons, and lies one-half inch nearer the wrist than the superficial arch; its branches are three palmar interosseous, recurrent carpal, posterior perforating. The brachial artery is a continuation

of the axillary, and passes down the arm from the teres major to center of the bend of the elbow; important relations—in front, skin and superficial fascia, the median nerve in the middle third of the arm, median basilic vein at lower part. Behind—triceps, Coracobrachialis, musculo-spiral nerve, superior profunda artery. Laterally—Median nerve is on the outer side above and inner side below. Ulnar and internal cutaneous nerves are an internal relation above. The basilic vein is a little to the inner side. Branches—superior profunda, inferior profunda, anastomatica magna, nutrient, muscular, terminal (namely, radial and ulnar arteries).

3. Describe brachial plexus and great sciatic nerve?

ANSWER.—(The formation of the brachial plexus is best shown by a diagram, and I advise candidates to submit a labeled diagram, instead of a description). (1) The brachial plexus nearest the median line consists of the parallel trunks of the fifth cervical, sixth cervical, seventh cervical, eighth cervical, first thoracic, second thoracic, and third thoracic nerves. (2) Passing outward, the fifth and sixth cervical unite, the eighth cervical and first thoracic unite, the seventh cervical divides, and a communicating branch joins the first and second thoracic. (3) An inch further out the upper division of the seventh cervical has joined the trunk formed by the union of the fifth and sixth cervical, while said trunk has given off a large branch, which passes down to unite with the lower division of the seventh cervical, and with a small branch from the eighth cervical. Thus the plexus at this point consists of three large trunks or cords—the upper one formed by the fifth, sixth, and upper half of the seventh cervical nerve; the middle and deeper one, formed by the lower division of the seventh cervical, a large branch from the united fifth and sixth cervical, and a small branch from the eighth cervical; and the lower one formed by the union of the eighth cervical and first thoracic; while below these three trunks are the second thoracic and third thoracic, or intercostal branches. (4) Further out, the upper cord divides into the musculo-cutaneous nerve, and the outer head of the median nerve: the lower cord divides into the inner head of the median nerve, the ulnar nerve, the internal cutaneous nerve, and the nerve of Wrisberg; while the middle trunk divides into the circumflex and musculo-spiral nerves. The two lower thoracic, or intercostal nerves, join to form a loop which connects with the nerve of Wrisberg. "The great sciatic nerve is the continuation of the upper band of the sacral plexus." It passes from the pelvis through the sacro-sciatic foramen, descends through the gluteal muscles, passing between the great trochanter and ischial tuberosity, and thus down the back of the thigh, terminating in the popliteal space, by dividing into the external and internal popliteal. It gives off muscular branches to the biceps, semi-membranosus and aducta magnus.

4. Describe the portal circulation.

5. Name flexor muscles of hand, extensor muscles of same.

ANSWER. — Flexors — flexor carpi radialis, flexor carpi ulnaris, flexor carpi radialis longoir, palmaris longus. Under certain circumstances the following may be included: Flexor sublimis digitorum, flexor profundus digitorum, flexor longus policis, flexor brevis policis. Extensors—extensor carpi radialis longoir, extensor carpi radialis brevoir, extensor carpi ulnaris. Secondarily, the extensor ossis metacarpi polisis, extensor communis digitorum, extensor minimi digiti, extensor longus polisis, extensor brevis polisis.

NOTE.—Modern anatomists do not cassify these muscles as flexors and extensors of the hand, however.

6. Describe Scarpa's triangle, popliteal space.

ANSWER.—Scarpa's triangle is an area on the front of the thigh, bounded as follows: At the base by Poupart's ligament, internally by the adductor longus, externally by the sartorius; superficially, by the skin and fascia; underneath, by the iliacus, psoas, pectineus, adductor longus. Important contents—Femoral artery and vein, and anterior crural nerve. The popliteal space is a trapezoid space behind the knee joint, bounded externally by the tendon of biceps femoris above, and by the outer head of the gastrocnemius below; and bounded internally by the inner hamstring tendon above, and by the inner head of the gastrocnemius below. Important contents: Popliteal artery, vein and nerves.

7. Describe (a) superior longitudinal sinus, (b) lateral sinus, (c) torcular herophili.

ANSWER.—(a) The superior longitudinal sinus is a venous channel, resting in a groove which passes from the crista galli backward along the inner surface of the skull to the internal occipital protuberance. The groove is converted into a canal by fringed processes from the dura mater, called the falx cerebri. (b) The lateral sinuses are similar channels which pass from the internal occipital protuberance outward and forward to the jugular foramina. (c) The torcular herophili is a depression at the point of confluence of the lateral and longitudinal sinuses.

8. Give a short description of pericardium.

ANSWER.—The pericardium is a fibrous sac which envelops the heart. It is lined with an endothelial membrane, which is reflected onto the surface of the heart.

9. Give a short description of pleura.

ANSWER.—The pleura is a double fibrous sac enveloping the lung. One layer of the pleura is attached to the chest wall, while the other layer is reflected onto the surface of the lung. The opposing surfaces of these layers are endothelial, and secrete a serous fluid.

10. Give anatomy of kidney.

ANSWER.—The kidney consists of an outer fibro-muscular capsule, a cortex, and a medullary portion. In the cortex are the capillary tangles, known as the glomeruli, which receive

bules begin from pouches around the glomeruli and the tubes, after a tortuous course toward the center of the kidney, dip down as the loopes of Henle, return to the cortex, and empty into large, straight collecting tubes, which empty by clusters into the central cavity or pelvis of the kidney. This pelvis connects with the ureters, which convey the urine to the bladder. The medullary portion of the kidney is made up, largely, of the collecting tubes.

CHEMISTRY—Answered by Hansell Crenshaw, M. D.

1. (a) Give specific gravity of albuminated urine. (b) Also two tests for albumen in the urine.

ANSWER.—(a) Above 1.025. (b) Boil suspected urine, to precipitate albumen, and add a few drops of nitric acid to distinguish precipitate from phosphates. Or add urine gradually above a strata of nitric acid, to produce albuminous ring at point of contact.

2. (a) What are the antidotes for bichloride of mercury? (b) Treatment (chemically) of poisoning from same.

ANSWER.—(a and b) Albumen, as white of egg.

3. Give properties of nitrous oxide, or "laughing gas."

ANSWER.—Invisible, sweetish, inflammable gas, capable of producing temporary anesthesia.

4. What is the chemical composition of pancreatic juice?

ANSWER.—Pancreatic juice is above ninety per cent water, and contains the following organic ferments, besides sodium chloride and other inorganic salts: Trypsin, steapsin and amylopsin.

5. Give chemical characteristics of hydrate of chloral.

ANSWER.—It is a neutral, unstable, organic compound, containing water of crystallization, and classed as a chlorine derivative of acetic aldehyde.

PRACTICE—Answered by Hansell Crenshaw, M. D.

1. Give etiology, symptoms and treatment in pyelitis.

ANSWER.—Cause may be renal calculus, extension from urethritis or cystitis, tuberculosis, infectious fevers, exposures, etc. Symptoms: Lumbar pain, pus cells, red corpuscles, mucus, etc., in the urine. Treatment: Rest in bed, liquid diet, diuretics, saline cathartics.

2. Give etiology, symptoms and treatment of acute ascending (Landry's) paralysis.

ANSWER.—Cause: Probably degeneration of motor nerve centers, beginning first with those controlling the lower extremities. Symptoms: Palsy, beginning in the feet and extending upward, so as to involve all the muscles within a week, when the medulla is affected, and the patient dies.

3. Give etiology, symptoms and treatment of neumothorax.

ANSWER.—Cause: Rupture or perforation of the pleural sac from any cause, such as traumatism, tuberculosis, malignant disease, etc. Symptoms: Bulging of intercostal spaces, sudden pain, dyspnea, cyanosis, etc. Treatment: Adhesive strapping of chest, stimulants, and symptomatic treatment.

4. Give etiology, symptoms and treatment of dilatation of the heart.

ANSWER.—Cause: Any condition putting excessive work on the heart, such as athletics, mitral or tricuspid insufficiency, aortic stenosis, etc. Symptoms: Displacement of apex beat from the median line, shortness of breath, enlarged cardiac dullness, etc. Treatment: Rest and exclusion of excitement. Loss of compensation calls for digitalis.

5. How would you diagnose cerebral hemorrhage?

ANSWER.—Diagnostic signs are sudden convulsion or unconsciousness, flushed face and blue lips, hemiplegia, coma, lowered temperature, etc.

6. Give treatment and general management in such case.

ANSWER.—I would prescribe rest in bed, with head elevated; ice cap, symptomatic treatment, and prohibition of stimulants.

7. What are the most reliable signs of death?

ANSWER.—Cessation of the heart's action. Redness under a ligature around the finger indicates that the heart is still acting, though possibly too lightly to be otherwise observed.

8. What is meant by sympathetic disturbance?

ANSWER.—Communication of abnormality from one organ to another by means of nervous connection. For instance, the inflammation of the right eye following injury, etc., to the left eye.

9. Discuss autoinfection.

ANSWER.—Autoinfection refers, principally, to the absorption from the alimentary tract of poisons developed therein during digestion, which poisons are normally not absorbed. The symptoms are headache, vertigo, nausea, lassitude, insomnia, etc. The treatment is fasting, then light diet; intestinal antiseptics, such as salol and eliminants, such as calomel.

10. Give symptoms and treatment of Graves' or Basedow's disease.

ANSWER.—Symptoms: Palpitation, goiter, exophthalmos, tremors, Græfe's sign. Treatment: Rest, avoidance of excitement; also thyroid extract, bromides, digitalis, and, sometimes, operative procedures.—*State Board Journal of America.*

(To be continued.)

Inclosed find one dollar for THE MEDICAL BRIEF for one year. I don't want to miss a copy, as the BRIEF is useful information, and every copy is worth the price. —C. M. THARP, M. D., Kingston Mines, Ill.

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A work of this nature will enable the general practitioner to diagnose these conditions of the eye, and when they get beyond the general practitioner's treatment it would be well to consult a specialist.

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Editorial.

Chemistry—Its Advances.

The history of chemistry, proper, begins with Robert Boyle, who taught, as its main object, the acquisition of a knowledge of the composition of bodies. The conception of this aim marks the date from which chemistry may be regarded as a science. This merit belongs to an Anglo-Saxon (Boyle). Next in line comes a Frenchman, named Lavoisier, who gave the stepping-stone of advance. Then down through the ages to Paracelsus, Van Helmont de la Böe Sylvius, Tachenius, and others of note, came the period of medical, or iatro-chemistry, and then from the middle of the seventeenth century iatro-chemistry gave way to other branches. Physical chemistry, with the accompanying doctrine of affinity, has made immense strides, and has greatly broadened its foundations during the last two decades. At last the key that opened the whole advance is combined in the elegant pharmaceuticals of today.

What Food is Needed?

Doctor, suppose you have a patient who is troubled with indigestion, so that when he eats food it passes off by the bowels practically unchanged, and the patient remains weak. The bowels are tender and congested; moving too frequently.

You would prescribe medicine for this case, of course, but do you really know what kind of food is best for him? Are you prepared to tell the family just what they should use, and how to prepare it? Some foods are easier of assimilation than others, and the method of preparation still further affects this. When digestion

and assimilation are almost at a standstill such knowledge is at a premium.

It is as much a part of the practitioner's duty to instruct the family about the patient's food as about how to give the medicine, and the practical details of preparation enter largely into the question of results.

The doctor may say that he is neither a nurse nor a cook, that his business is to practice medicine. But the doctor has to press all kinds of material into service as nurses and cooks, and if he knows enough of both to instruct his helpers so that they may co-operate successfully with him, so much the better for patient and doctor.

If you should ask a Chinese doctor what food would be best for the above patient, it is a foregone conclusion that he would say: "Give him boiled rice, and nothing else until the digestive organs are restored to a normal condition." Is this correct?

Now is a good time to ask and to think about this before you are confronted with the actual emergency. What food is needed to tide this patient over his season of weakness, and to set him on his feet once more?

The "Good Man."

There was a man in town yesterday, who formerly worked in Atchison for a hundred dollars a month. He now receives a salary of ten thousand dollars a year, and he doesn't work as hard as he did.

This man is no great genius; he is simply a "good man," and there are thousands of such. Being a "good man" means that a man is industrious, loyal, intelligent and well-behaved. It is easier to be a "good man" than it is to be a bad one. There is a scarcity of "good men," and those who are patient and work away the best they can are always recognized and substantially rewarded. The man who never does his share, who is willing to impose on his office or shop associates, never comes to the front.

The point we desire to emphasize is that it is easier to be a "good man" than it is to be a bad one. You must live, so why not live in the easiest way? The easiest way is to be a "good man." That is, to do your work faithfully, intelligently and honestly and treat yourself and others right.—*Exchange.*

The above teaches the lesson that good men are always in demand.

The good doctor is the one who refuses to be prejudiced, either for or against anything, or to let others govern him. Who reads all sides of a question, and comes to his own conclusions. In his use of remedies the good doctor is not influenced by what others may say about them, but applies the test of merit. When a remedy serves him well he will keep on using it. The good doctor is after results; he wants to cure his patients, and ridiculous distinctions of a sentimental nature can not stop him from using remedies which he knows by experience are good.

Some of the arguments against established remedies, whose worth time and experience have proved thousands of times, are so far-fetched that nothing but a determined and self-interested effort to prejudice the doctor can account for them.

The doctor whose good, common sense controls him in all things is the man who does an ever-increasing practice, and succeeds simply because he deserves to.

Speaks for Itself.

We have received an inquiry from an old doctor friend of ours asking why we do not deny the lies that are told about THE MEDICAL BRIEF and its editor. In reply will say that we do not do so for the reason that THE MEDICAL BRIEF speaks for itself. Compare the BRIEF with any journal that has a lying article in it, and you will find the BRIEF does not suffer from the comparison. As for the editor, lies do not do him any harm; in fact, we doubt whether they ever do anyone harm, from the fact that the liar always overdoes it.

The Real Reason.

In the case of the ethpharmal proprietaries of established reputation, a dollar preparation usually costs the retail druggist about sixty cents a bottle, whilst the so-called pharmacopeia substitutes cost only a few cents. Of course, the latter have no virtue, but the druggist

cares nothing about that; the profit that he makes is the real reason why the druggist recommends the imitation instead of the original. No intelligent physician will prescribe these worthless substitutes.

Bossism.

Bossism is now prevalent in all trades and professions. When a man or a set of men want to boss you, it's always graft. The more ignorant a man is, the easier he is to boss—the more intelligent a man is, the harder he is to boss. By proving itself so hard to boss, the medical profession has shown that it is composed of a very intelligent class, as a rule.

How Kind.

How kind the grafters are to want to persuade you to let them boss you for nothing.

If the druggist is to dictate to the doctor what he shall prescribe, what's the use of doctors?

[Written for the MEDICAL BRIEF.]

Valvular Disease of the Heart.

BY H. K. DUNKLEE, M. D., PH. D.,

Professor of Theory and Practice of Medicine in the Denver Homeopathic Medical College. Denver, Colo.

Since the valves of the heart are so situated as to be circumscribed by a circle the size of a large receiver of the stethoscope, it is impossible to determine in many cases which valves cause a murmur heard faintly in all parts of the precordial region. In order to locate the lesion it is necessary to fix the point of greatest intensity of the murmur, and with which sound of the heart it occurs.

The reason a murmur, due to certain valvular lesions, can be heard with greater distinctness at a given point, is anatomical. Sound is heard with greatest distinctness through a solid medium, hence the column of blood having passed the valves, forms the best medium for conveying the murmur.

The aorta connected with the left ventricle passes to the right and above the heart, coming nearest to the surface near the second intercostal space at the right border of the sternum. This is the proper place to auscult the aortic semilunar valves. The descending aorta passes to the left of the spine, and the aortic murmur can be heard over the course of both the thoracic and abdominal aorta.

The pulmonary artery, connected with the right ventricle, comes nearest to the surface at the upper part of the second intercostal space at the left of the sternum. By manipulating the stethoscope the exact spot is easily located.

The mitral valve is best ausculted at the apex, and the sound is conveyed to the region of the axilla through a rib.

The tricuspid valves may be ausculted best over the body of the sternum, above the ensiform cartilage.

It is more easily remembered by observing that we listen to the outlet of the ventricles above and to the outlet of the auricles below; or, in other words, we auscult the upper portion of the heart from below, and the lower portion from above the center of the heart.

In the case of the outlet of the ventricles there is another cross—that is, for the left ventricle we listen to the right, and for the right ventricle we listen to the left of the sternum. The reason is apparent when the distribution of the blood vessels is taken into consideration.

When the point of greatest intensity has been located, we ascertain with which sound of the heart the murmur occurs. Following the first sound of the heart, the ventricles are contracting, or in a state of systole; that is, the blood is passing out of the ventricle. Therefore, a murmur heard with greatest intensity at either the aortic or pulmonary areas, must be due to obstruction to the current of blood in its normal direction. If heard with greatest intensity at the mitral, or tricuspid areas, it must be due to leaky valves or regurgitant in character.

Following the second sound of the heart —the ventricles in a state of diastole—the blood is passing into the ventricles. If at the mitral, or tricuspid areas, a murmur is of greatest intensity, there must be an obstruction to the current of blood in its normal direction. If it occurs at the aortic, or pulmonary areas, it must be due to leaky valves or a regurgitant murmur.

The mitral is most often affected. When mitral regurgitation is the form of the lesion, the circulation in the pulmonary capillaries is impeded. Shortness of breath is a prominent symptom. The circulation of the right ventricle is embarrassed, and the ascending vena cava is in a state of passive congestion.

As the hepatic vein empties into the ascending vena cava, it becomes passively congested, and in turn the radicles of the hepatic, the sublobular, and finally the intralobular. The lobular and interlobular are not over-filled by the backset, but contain less blood than normally. On account of the center of the lobule being surcharged with blood in the intralobular vein, it has a dark appearance. The periphery has a lighter appearance. The name nutmeg liver was applied to this condition.

The portal vein receives the blood from the gastro-intestinal canal. The gastric from the stomach, the splenic from the spleen, the superior mesenteric from the small intestines and a portion of the colon, and the inferior mesenteric from the balance of the colon, and through the superior hemorrhoidal branches, from the upper part of the rectum. The middle and inferior hemorrhoidal veins empty into the internal iliac and ascending vena cava. This is the most dependent anastomosis between the portal and general circulation.

Disease of the liver, as cirrhosis, causes passive congestion of the portal system. The effect of passive congestion of the gastric vein is gastric catarrh, and in some cases, hematemesis. The effect of passive congestion of the mesenterics is intestinal catarrh. Diarrhea is present in most cases, but diarrhea may alternate with constipation. The hemorrhoidal veins are surcharged with blood, and hemorrhoids are commonly present.

The effect of passive congestion, due to heart lesion, is the same on the radicles of the portal vein as from cirrhosis of the liver. Passive congestion of the ascending vena cava is always present in case of heart lesion, and the effects are more extensive than from cirrhosis of the liver in not being confined to the portal circulation. The middle and inferior hemorrhoidal veins empty into the internal iliac, a branch of the ascending vena cava, and can not relieve the congested superior hemorrhoidal, a branch of the portal system, as in cirrhosis of the liver, since the ascending vena cava is congested, in heart lesion, the same as the portal vein. This makes it clear why hemorrhoids are more troublesome in valvular lesion than in cirrhosis or other disease of the liver. In every marked case of hemorrhoids, it is advisable to examine the heart.

Around the spinal cord, within the spinal canal, a portion of the space is occupied by the cerebro-spinal fluid, and a portion by the network of veins which empty into the ascending vena cava. In passive congestion of the ascending vena cava, the veins, over-filled with blood, encroach upon the space normally occupied by the cerebro-spinal fluid. The cerebro-spinal fluid is forced into the ventricles at the base of the brain. As the cerebro-spinal fluid fills the ventricles fuller than normal, the cranium being non-elastic, equal space must be made by forcing the blood from the cerebral vessels. This produces a partial anemia of the brain, and has a tendency to produce fainting spells, and even syncope.

Since the renal vein empties into the ascending vena cava, valvular lesion produces passive congestion of the kidneys. The quantity of urine is lessened, and albuminuria is present.

Dropsy, due to heart lesion, begins in the feet. When due to primary renal disease, it appears as a puffiness under the eyes. When due to embarrassed portal circulation alone, as in cirrhosis of the liver, it first appears as ascites.

Clayton Block.

[Written for the MEDICAL BRIEF.]

Can Infant's Cry be Heard in Utero?

BY C. A. BUTTON, M. D.,
Holland, N. Y.

I wish to briefly answer Dr. Watts, in June BRIEF, as to his query, by asking: Can the fetus cry before its lungs have been inflated? Of course, asphyxiation would follow breathing in utero.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
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[Written for the MEDICAL BRIEF.]

The Evolution of Insanity.

BY ROBERT JONES, M. D., M. R. C. P., F. R. C. S.,
Resident Physician and Superintendent, London County Asylum, Claybury; President of the Medico-Psychological Association of Great Britain and Ireland.
London, England.

NO. II.

What do we know about the causation of insanity? We are aware of the fact that heredity plays a most potent part in the transmission of insanity. A history of insanity in the ancestors determines a tendency to this in the descendants. We know, also, that the spread of venereal disease is responsible for increasing certain forms of insanity of a most hopeless character as to recovery, and that overstimulation, in many directions, induced by modern social conditions, contributes to insanity. Especially do we know that intemperance in the use of alcohol is a contributory factor, and statistics collected from many sources, and for a term of years, present an almost unchanged average incidence of insanity through alcohol. And although several antecedents may share in the production of insanity, it is definitely ascertained and agreed that one of the antecedents may be the proximate cause, and may be the direct agent in producing the fully-developed disease. An average of twenty-two per cent of men and ten per cent of women who are insane in London owe their insanity to alcoholic excess.

Attention may be specially called to the diminishing birthrate as further evidence of the love of selfish pleasure, and the shunning of parental responsibility incident upon so-called progress; and not only is there a diminishing birth-rate, but, unconnected with this, marriages are contracted later. In 1901 the birth-rate for England and Wales was 28.5 per 1,000 living, then the lowest rate since the civil register was established, and 1.4 per 1,000 below the mean rate in the ten years immediately preceding. In 1905 this had fallen to 27.6, while for London the rate had fallen to 27.1 per 1,000. This rate has been declining for many years, but never before 1898 had it fallen below 30 per 1,000. Civilization means the association of men and women in towns, which only the rich can circumvent, their wealth enabling them to obtain ready access to the country. City life means artificial desires and their gratification; but civilization also implies progress, which proceeds at the expense of the less fit. A higher standard is fixed, and those who are unable to attain it are left behind to sink lower and lower.

The growth of insanity is undeniably a matter of considerable public importance, and few subjects have of late more employed the pen of every class of critics than the legal curative, custodial, and even the preventive aspects of insanity. Overdrawn and unjust statements have

been made that the insane today are under the care of officials who have neither received the necessary training for conducting scientific investigations, nor have the inclination to pursue them. Medical officers of asylums are stated to be physicians only in name, for they devote neither thought nor time to professional work. The asylum service is held up as a scarcely conceivable career for a young man of promise, or for a person of real capacity. Moreover, it is stated to be a service which has practically excluded insanity from the area of scientific investigation. It is suggested that a special hospital would render unnecessary "the provision of a constantly increasing number of huge buildings for the life-long incarceration of thousands of men and women who are now annually suffered to drift into hopeless incurability," and who accumulate *ex hypothesi* from the failure of asylum physicians to cure them.

Is the treatment of insanity today the shame and reproach which our critics assert? I venture to think that these statements are not only inaccurate, but they are also detrimental to the position we claim to hold in the larger medical world outside our asylums.

To begin with, our present institutions for the care and treatment of the insane are the evolutionary growth of sympathy and unabated humanitarian zeal for curative as well as custodial interests, and it may be truly stated that they are the most up-to-date nursing institutions to be found in any country. Again, we all recognize that diseases of the mind are primarily and essentially an expression of diseases of the body, and that their classification should be based upon general pathology.

The practice of our art depends upon the anatomist, the physiologist, the histologist and the general pathologist, and we share in the knowledge and the discoveries made in the whole field of medicine, and our treatment is that which appertains to all medical men. We claim for ourselves the whole study of medicine, as it forms a part and belongs to the whole profession. Are the biochemical changes in the synapses or the neurones able to explain to us the nature of a mental judgment, or even of epilepsy? Or are those Protean changes described as hysteria definitely ascertained?

Do we know the conditions underlying the nature of delirium as it accompanies pneumonia, hyper-pyrexia, hyperemia and the specific fevers? If the explanation of some of these conditions, which form a part of the domain of general medicine, is at present undiscovered, I hardly think the failure to discover their essential cause lies at our door. I do not say that we ourselves are satisfied with our present results; on the contrary, we desire to attain further improvement, but we are doing our best in the light of our present knowledge. It is not fair to compare our asylums with general hospitals, and to state that in them we only treat symptoms, although in insanity the symptom often transcends in importance the underlying physical abnormality, and when a patient is soothed by remedies fitted to allay the irritability of a diseased brain that remedy is properly administered, and who will venture to say that this treatment of symptoms is empiric or wrong?

The physician who neglects to treat symptoms may be shunning a responsibility which we, as physicians in asylums, are bound to undertake for our patient, who is not responsible for his own acts. We have to see that food is taken when delusions forbid and command otherwise; we have to see that patients are properly clothed who prefer nudity, and that they take exercise when disinclination and restiveness are extreme, as those of us who are continuously familiar with insanity apprehend.

In the Claybury asylum, with a record of 10,945 cases (4,937 males and 6,008 females), the recovery rate for twelve complete years, including 1905, works out at 40.99 per cent of the total admissions (males 37.85 and females 44.28); but early in the last century John Haslam, of Pembroke Hall, Cambridge Apothecary to Bethlem Hospital, relates an experience of 8,874 cases (4,042 males and 4,832 females), and extending over forty-six years in the old Bethlem Hospital at Moorfields, and he states that among his cases of mania 67 per cent recovered. In all the asylums in London for the last year the corresponding recovery rate for cases of mania was only 34 per cent,

whereas in melancholia it fell to 27 per cent. On the other hand, the general death rate among the insane has considerably diminished, and in the quinquennium already referred to the percentage of deaths to the daily average number resident in England and Wales was the lowest recorded for thirty years, viz.: 8.87 per cent.

Having analyzed the recovery rate, and noticed its fall within recent years, let us now compare the varieties of insanity as they are known today with those of which we had knowledge a century ago. Of these, epilepsy appears to have undergone but little change; it is still the intractable neurosis it always was in regard to cure; whilst general paralysis, on the other hand, has become more common. John Haslam was the first to describe this disease, although Esquirol had already noted the extreme gravity of those cases in which dementia was complicated with paralysis. Baillarger remarked in much later times, of this discovery, that it was one of the greatest steps of advancement made in the history of mental disease. It is only fair to suppose, however, that the disease was not then the scourge and the reproach to our treatment that it is today.

In my own experience, for 1905, at Claybury, a proportion of 36.5 per cent of the total deaths were from general paralysis of the insane. The time of onset of general paralysis after syphilitic infection appears also to be shorter than formerly. In a recent average the period is given as about ten years, whereas past records give an average of fifteen years, a fact which tends to show one of two things, viz., either a diminished resistance of the individual to the effects of competition, or an increased "stress" through the conditions of modern life in which the stimuli are both more numerous and more complicated. It is certainly not syphilis alone which is the cause of general paralysis, for in the insane population of the Straits Settlements Dr. W. Gilmore Ellis, a competent observer, states that general paralysis is exceptional there, although syphilis is rampant; probably the Malay race has not reached the stage of evolution in civilization at which "stress" is felt. It is further asserted by those in a position to form a judgment that syphilis is not more common today than it was a century ago, although general paralysis appears to be on the increase. The subtle and lethal effects of syphilis upon the nervous system are a matter of every-day experience, and it may be that the anti-syphilitic treatment of today which has caused the almost complete disappearance of rupial sores, periostitis and necrosis, has, in some manner, at present unknown, so altered the nutritive plasma that the most highly evolved cell (the neuron) reflects its ravages before cells of baser quality become affected. We are able to say fairly definitely that syphilis is an almost constant antecedent of general paralysis, and yet we all say that syphilis is preventable. Why, therefore, not prevented? Whilst conscientious objectors and other faddists make themselves heard, the legislature is silent about infection from this disease, which saps the energy and vitality not only of the actual victim, but also of many innocent descendants.

What did the early physicians know of the condition now so often referred to as "dementia præcox?" Then apparently so rare, but now so common that it attacks prematurely our most promising and educated youth, the brain-worker rather than the manual laborer; but now in young men rather than women, and it is a disease so incurable that it tends to fill our asylums with hopelessly insane patients.

Haslam refers to it as "a species of insanity sometimes occurring about the time of puberty, especially in those who have possessed a good capacity, a lively disposition, and in females more than in males. Their faculties are gradually obliterated until they are at last complete and incurable idiots." Although premature dementia, as such, is not referred to in the Lunacy Commissioners' Report, the statistics for the last quarter of a century support the assertion that it is more common than formerly. These cases almost invariably commence in depression, and it is justifiable to conclude they were classed as melancholia.

Senile insanity, which shows the wreckage due to long-continued stress, has apparently undergone a remarkable increase, partly due, it is acknowledged,

to increased registration. In some districts, senile, or, I would call it pre-senile, insanity, has increased from eleven to twenty per cent of the total admitted into asylums within the last sixteen years.

It is interesting to note that the congenital varieties of mental deficiency show but little increase, according to asylum statistics. These are teratological variations not controlled by any natural laws, and they make themselves apparent by arrest of development often accompanied by physical stigmata. These varieties, which exist in every country, and among every race, are the least reflection upon civilization. They occur among animals, and are familiar to all observers of comparative natural history. In the records of the most barbarous and least civilized of races there occur two forms of psychic anomalies, viz.: the congenital and the toxic, the latter due to some poison, such as occurs from alcohol in our own country, and this latter form has, of late years, aroused much interest, as it is especially one of the preventable varieties.

A hundred years ago practically nothing was known about insanity, and at this time its treatment had been relinquished by the faculty, and fallen into the hands of charlatans. In 1750 a man was described as a conjuror who "cured" insanity. Nevertheless there were able and learned men during this century who interested themselves in mental diseases. The writings of William Perfect, in 1770, described cures from epilepsy, and particularly referred to idleness and gluttony as the causes of insanity—there is a debauchery of inaction as well as of repletion! There are overwhelming statistics today demonstrating that idleness and drink and idleness and insanity are closely connected, and the list of employments of persons of all ranks in asylums supports this view. The writings of Joseph Mason Cox, of Fishponds, in 1804, referred to the mental effects of inebriating potations, and he stated these were due to the circulation of poisons about the head. He called especial attention to the fact that drunken sires were succeeded by insane children.

Alexander Crichton, physician to the Westminster Hospital, London, published, in 1798, two most interesting volumes upon the psychological origin of insanity, and he referred particularly to the effect of the passions in this respect. Thomas Arnold, of Leicester, in 1806, published observations on the nature of insanity. Davis, of Sheffield, translated Pinel's works. John Monro, of Bethlem, and William Battie, also published works about this period, the latter stating that insanity might be cured if the treatment were timely and properly effected. Pargeter, in 1792, offered a classification of insanity, and included in this either maniacal disorders characterized by excitement or those accompanied by collapse. He referred at considerable length to the disturbed emotions as being a cause of insanity, and he named four volumes which, in his opinion, had a most unfavorable influence in causing a mental breakdown, viz.: Wesley's *Journal*, Watt's *Hymns*, the *Pilgrim's Progress* and the *Fiery Furnace of Affliction*, a book the title of which indicates its character. It is especially noteworthy that he describes those who marry, having an hereditary history of insanity, as enemies of their country.

It will be noticed that I have hitherto said little of heredity as a causative factor in insanity. It is not that there is nothing to say. On the contrary, heredity is the most important, as well as the most powerful, antecedent in insanity, but the prominence recently given to this question and the numerous discussions upon "Mendelism" forbid my encroaching further on the reader's patience.

It is certain that permanent progress is a question of breeding quite as much as it is of pedagogy, and of a healthy germ-plasm as much as of training. However much influence the environment may exercise over the individual the nature of the offspring is without doubt and essentially a matter of inheritance. In some of the States of America this question has been boldly met with legislative suggestions, and I confess I feel that in eugenics are to be found the chief remedies for the amelioration of social pathology, but how these are to be applied is a matter of detail. Some are ready with legal restrictions and penal awards, whilst others suggest inculcating prin-

ciples as to the duties to be fulfilled by those who would look for health and healthy families.

The highest function of medical science is the prevention of disease, *i. e.*, the adoption of special measures which are known through experience to be protective against injurious influences; and of all known diseases there is not one in which there is either a greater need of prevention or one which permits of more effectual limitation by precautionary measures when taken in the early stages than insanity. Hence we need statutory authority to treat incipient insanity as other diseases are treated, viz.: with full freedom to the physician and proper and adequate safeguards for the interests of the patient. Such means would prove to be a most valuable auxiliary towards prevention. I am of the opinion that those who undertake the care of the insane in the incipient stages should be especially sanctioned by recognized authority so to do; but I do not believe in public bodies undertaking the care of cases making high payments, as this can be better done by private enterprise and without the "red tape" so dear to public authorities.

In regard to insanity as in other diseases, the neglect of ordinary hygienic rules, and the failure to observe natural laws are inevitably and remorselessly punished. Nature is a good friend, but a bad enemy, for she never forgives a wrong, and she is again wholly selfish—perhaps, more correctly, wholly just—for she invariably decides the race to the swift and the battle to the strong. It is in the observance of a proper health code and by an adherence to temperance in all things, nay temperance in temperance itself, that insanity can best be prevented.

If only the evils of alcohol and venereal disease were disposed of, half the problem of insanity would disappear with them. Many suggestions on the lines of reclamation, education and restriction have been made for fighting intemperance, but hitherto they have not been distinguished for their wisdom or practical statesmanship.

The whole of the so-called "defective class" have a right to be protected against themselves, and the control which they lack should be supplied to them from without; at the same time, society has a right to be protected from the transmission of their defective qualities to future generations. I have no sympathy with the crude and barbarous mutilations proposed by indiscreet and fanatical persons who are devoid of any quality of sympathy or patience necessary to enlightened reform. It is certain that some defectives can be assisted to become in a great measure self-supporting, and it is possible to reinstate others of them in the ranks of the wholly self-sustaining.

It appears to me necessary to subdivide and classify the whole of the defective classes, and if possible to bring them all under one great department of State so that in youth they may be notified and registered, in adolescence be strictly observed, and in maturer years those of them still supervised who have not succeeded in taking their place in the community as contributors to its welfare, and in this way be saved from a life of crime, vice or any of the forms of pauperism. There should be adequate provision for their bodily comforts without extravagance, and such happiness as they are individually capable of, accompanied by a guarantee that society shall not suffer from their defects.

I am of opinion that insanity, which, of all illnesses, inspires terror beyond any other, and causes a sense of helplessness, might be lessened if the hospitals of our cities (whether associated with a medical school or not) were to initiate out-patient departments, where patients could apply for advice and submit to treatment for mental symptoms without loss of liberty. Where this experiment has been tried it has proved most satisfactory. Moreover, our public asylums, built and supported by rate-payers, should give them some relief and benefit in return. They should be the centers for disseminating, through their medical officers and nurses as missioners, a health-conscience and a creed which should reform the districts they serve. Each of our asylums should be a center for clinical instruction. It should be a school where any qualified medical practitioner could refresh his knowledge of the subject of insanity in all its bearings, and where the medical staff should

give advice to any applicant suffering from premonitory symptoms of incipient insanity, and power should be given by law to take such cases in for treatment, if necessary, as voluntary boarders.

An asylum should be the place where the principles of eugenics should be widely disseminated, for surely it is wiser and better to make every effort to arrest insanity before it has reached the stage of certificates, than to wait until it has been legally established. The law of the land empowers the medical man to deprive his fellow-citizen of his liberty; and upon a written statement a citizen may be incarcerated until he can show that he is entitled to his restoration. To no other subject in the State is a similar power given to dispossess an individual of his liberty, to disfranchise him, to alter his position towards his friends, and his responsibility to the law, and so to disturb his social relations that the greatest distress is caused to his relatives. Surely this power imposes upon the medical man the duty of being acquainted with his work, and every facility should be given by public bodies for students and medical men to receive full and adequate clinical and systematic instruction in insanity. It is for this reason that I would strongly support the proposed scheme for the establishment of "reception houses," although I think that the erection of an acute mental hospital within the grounds of the asylum is a most excellent and admirable proposal, and one which is expected to yield the most beneficial results.

[Written for the MEDICAL BRIEF.]

The Choice of Treatment for Fibromyoma of the Uterus.

BY J. INGLIS PARSONS, M. D., M. R. C. P., M. R. C. S.,

Surgeon to the Chelsea Hospital for Women. London, England.

The great variety in the size, situation and symptoms produced by these tumors, together with the difference in age, general health and social position of the patients, make the choice of treatment a difficult problem, and one requiring much judgment and experience.

In order to discuss the question adequately, I propose to consider the cases under seven different groups:

Group 1.—Cases which present no symptoms, and are discovered accidentally.—Under these conditions no operation is permissible, but the patient should be told of her condition, and warned that the tumors may give trouble if the growth continues. As far as it is possible, hygienic measures should be advised, and medicine be given to prevent any increase in growth. Since the tumors are found chiefly in women who have not had children, or have gone a long period without a child, it is possible they are partly the result of a baffled desire on the part of the sexual organs to reproduce the species. On this basis I advise measures to restrict the activity of the ovaries. No simulants should be allowed, the meat diet is reduced to a minimum, saline aperients are taken regularly to reduce the congestion of the pelvic organs, and bromide of potassium is given for four or five days before and after the menstruation, when the activity of the sexual organs is at its maximum. The patient is advised to avoid all erotic literature and conversation, and occupy her mind with some practical object in life, and to take regular physical exercise in the fresh air.

In thyroid extract we have a drug which appears to have direct influence in some patients over the growth of the fibromyoma.

The notes of the following case bear this out: A nurse, aged forty-two; single woman, came to me in July, 1903, complaining of nausea, severe pain in the pelvis, walking or standing; much worse during menstruation. The bladder was irritable, caused frequent micturition, and pain on defecation. Menstruation was regular, and the loss normal, less than year ago. She was thin, pale and delicate. On examination the uterus was found enlarged by fibromata. The fundus reached within two inches of the umbilicus. There was much distortion of the uterus; the cervix being twisted round and upwards to the left, almost out of reach, making electrical treatment impossible. She refused operation and preferred to try medicinal treatment. I gave her thyroid extract and iron between men-

struation, and during the period ergotin and ammonium bromide. In six months she had improved greatly. The pains and nausea had gone; she had put on weight and color, and could do her work with comfort, while the tumor had decreased and was five inches from the umbilicus.

We must draw a distinction between private and hospital patients. The latter can not afford to be long away from work, or spare the time necessary for a course of electricity, so that when medicines fail operation becomes necessary. With private patients it is different.

Group 2.—Moderate enlargement of the uterus by fibromyoma, with severe menorrhagia, but without pressure symptoms, although the patient may complain of pains.—Under these conditions, if the hemorrhage and pain can be abolished, the patient is restored to health. Since the female pelvis and abdomen have been designed to accommodate the enlarged uterus of pregnancy, it is not the size of the uterus and tumors that cause the symptoms, or we should never come across patients with tumors, but without symptoms.

Thyroid extract may be tried for these cases. To control the hemorrhage large doses of ergot may be given, but it rarely does much good. Chloride of calcium may also be tried during menstruation in doses of thirty grains, three or four times a day. It acts by increasing the coagulability of the blood. Viburnum prunifolium sometimes helps, as does suprarenal extract.

When the treatment already described has been tried and failed, we have two resources left. The use of the constant current after Apostoli's method, or operation. Each has its defects, but the balance between the two has altered of late years, owing to the reduction in mortality from operation.

The advantages of electricity are these: It is practically free from risk, when blunt electrodes are used, and no puncturing is done. I have been using it for fifteen years, and never lost a patient. It stops the hemorrhage, and takes away the pains in ninety-five per cent of this class of cases. No anesthetic and no nursing home are required, so, for private patients it is less expensive than an operation, and the patient still retains her sexual functions. In addition to this, it improves the patient's digestion, and they put on weight. It also helps to cure any constipation that may be present; a patient under my treatment went up from five stone to seven stone in three months.

Its disadvantages are that it takes up a great deal of the surgeon's time, compared to an operation, and the remuneration is much less. It is tedious to the patient, and does not remove her tumors, although it stops the growth and abolishes the symptoms for two or three years, and in many cases does so permanently.

To take the other side, the risk of the operation in this class is very small, but is still more than with electricity. An operation is more expensive to the patient and much less trouble to the surgeon. At the end of a few weeks it is done with, and over, although the patient may take some months to get strong. It gets rid of the tumors, and prevents further trouble, but at the expense of the patient's sexual functions, since the menopause comes on in a few years, even when the ovaries are left behind. Operation has this drawback, that it may be followed by a neutral hernia or adhesion of intestine to the stump or abdominal cicatrix.

It may be urged that the percentage of successes by electricity is placed too high. I can speak only from my own experience. In cases coming under this category the hemorrhage can be stopped in at least ninety-five per cent.

One of the reasons why failure with electricity takes place is that the surgeon expects improvement to come too soon. In half the cases there is no improvement in the hemorrhage until the treatment is nearly, or quite finished. There may even be an increase in the loss at first, but the pains begin to go away sooner.

In November, 1900, I had a patient aged thirty-eight, who, for over a year, had profuse loss, increasing every month. Menstruation went on for fourteen days, and she required eighty diapers. There was great tenderness and pain in the pelvis, with profound anemia. On examination the uterus was found uniformly enlarged with fibroids, and reached within one and a half inches of the umbilicus.

The sound passed four and a half inches. Thirty applications were given; improvement set in only after the treatment was finished. The pains disappeared, the hemorrhage was reduced to normal, and the patient has been quite regular since. This is one out of many cases.

Another point to be remembered is this: Many women are most anxious to become mothers. With one or two small fibromata in the body of the uterus there is nothing to prevent conception when the hemorrhage has stopped, and although many of the patients are sterile, a fair proportion become pregnant, and have living children in spite of the tumors. So desirable a result is always possible after electricity, but is impossible after hysterectomy.

In one of my earlier papers I demonstrated by experiment the fact that there is no molecular disintegration between the poles of a constant current, and, therefore, we must not expect the tumors to disappear; this prediction has been since verified in practice. Many neglect to use a treatment which is of great value, and will do what nothing else can do.

When it is impossible to apply electricity, a fair trial should be given to curetting. The improvement from this in reducing hemorrhage often lasts for six months. Some patients who are anxious to have children prefer to have this done several times rather than face hysterectomy, unless urgently called for. When curetting fails and electricity can not be used, we have still two operations before us, hysterectomy, or removal of the appendages. The former is the operation for choice, while the ovaries are left behind, but it sometimes happens that a patient's strength is so much reduced that the minor operation offers the best chance of life. In this group, with only a slight enlargement in the size of the uterus, there is no difficulty in completely removing both appendages. Or it may happen, as it once did to me, that the patient takes the anesthetic very badly. Only last year I began an abdominal section with a view to hysterectomy, when the patient's pulse and respiration showed signs of failure, probably due to extreme anemia; by the injection of strychnine and other measures, she rallied sufficiently for me to remove the appendages. She is now well, and has not menstruated again.

In my experience, the results from this operation have been successful when the appendages have been completely and not partially removed.

Group 3.—Small tumors producing pressure symptoms without menorrhagia.—When the bladder in these cases is affected, I find that electricity does not cure it. Why, I do not know.

If the pressure is on the bowel, with small tumors in the body, it can only be produced by retroversion. After the uterus is restored to its place, a Hodge pessary can usually be found to keep it there, and electricity can be used to restrain the growth of the tumors and take away the pains and tenderness. The only successful remedy for a bad case of pressure on the bladder is hysterectomy.

Or it may be that pressure symptoms are caused by the projection of a single sub-peritoneal fibroid without much enlargement of the uterus. The proper operation then, if it can be carried out, is a myomectomy. On January 3, 1903, I saw in consultation a lady, aged twenty-three, who suffered from intermittent pains in the abdomen, and pelvis aggravated by menstruation or active exercise. A single subperitoneal fibroid was found, and removed, leaving the uterus and ovaries intact. She made a rapid recovery, and has been in good health since.

Group 4.—General enlargement with pains and hemorrhage resembling the enlargement up to the fifth or sixth month of pregnancy.—The value of electricity and curetting appear to diminish as the tumors increase in size. In regard to the former, it can easily be understood that a current of one hundred M. A., passing through a tumor of one pound in weight, will have a quarter the effect when passed through a tumor weighing four pounds. There is also more likelihood of a distorted uterine canal and cavity, and difficulty in applying the electrode properly. For the same reason curetting can not often be thoroughly carried out.

In 1896 I saw a case of general enlargement of this kind on account of profuse menorrhagia. She was thirty-six years of age, and had two children, and was so weak from hemorrhage she could not

stand. I stopped the loss completely for five years, and she felt very well, and the tumor was most distinctly diminished in size, but the edema of the ankles never went away completely. In 1901 she had hemorrhage from the bowel, produced, I believe, by the pressure of the tumor above. This also was stopped by electricity. Since then she has kept well. Although this patient has been well for six years, she has not attained the permanent relief from electrical treatment which has so often followed in cases that come under Group No. 2. As the mortality from hysterectomy is so much reduced, I should advise operation for this group, and if this were refused I should try electricity.

There can be no doubt of the advantage of hysterectomy in this group over removal of the appendages. In the first place, the size of the tumor draws the appendages up, and puts them on the stretch, so that it is difficult to remove them completely, and unless this is done, the operation fails. Even when it succeeds, the tumor left behind is liable to sag about the pelvis and cause discomfort.

Group 5.—Tumors forming a round mass, nearly filling the pelvis, and sometimes impacted.—For these cases hysterectomy is the best treatment, and the sooner it is done the better, for we may arrive at a point where, from pressure on the bowel, ureters or bladder, the patient's condition rapidly deteriorates, and with it the resisting power necessary to withstand the shock of the operation.

Impaction, as a rule, is due to the tumor projecting under the sacral prominence. When it grows under and distends the broad ligament, we may have a most serious operation. In a recent case I found a large tumor filling the pelvis, and extending above the pubes to the umbilicus, while the uterus, normal in size, was on the left, and jammed up against the pelvic wall. The bladder was separated from the uterus, intimately adherent in front, and a piece of it was removed with the tumor. The opening was carefully sewn up, and the bladder drained. The large oozing space left in the broad ligament after removal of the tumor was treated by hot sponges, and then laced together with silk. Beyond symptoms of shock, she made an excellent recovery, and she is now well and free from symptoms.

Group 6.—Very large tumors, more or less filling the abdomen.—On account of the size of these tumors it is better to operate than apply electricity. Although the latter will take away the pains and stop the hemorrhage, it does not restrain the growth of the tumors enough, and after two years has to be repeated. Another point is that the patient may be a single woman, to whom the swelling of the abdomen is a serious drawback. The slight amount of shrinking in large tumors from the application of electricity is not sufficient to alter the general appearance. On the other hand, the removal of one of these large tumors with numerous adhesions, entails considerable risk. We must also remember that the growth of fibromyoma is much slower than that of an ovarian cyst, and is by no means progressive. Having attained a certain size, they sometimes remain stationary, and in a few cases may show signs of retrogression.

In November, 1896, a patient came to me with a large fibromyoma filling the abdomen, and reaching to the ribs. I advised operation, which she refused. Electricity was tried. The pains and menorrhagia were stopped, and for two years she was able to do her work as a dressmaker. 1898 the treatment was repeated. She has kept well since; has had no return of the pains or menorrhagia. I saw her recently, and the menopause appears to be coming on, but the tumor is bigger, and may have to be removed. It is remarkable that this patient should have kept so well for eight years, considering the large size the tumor had attained before she came for treatment. It emphasizes what I stated before that the female pelvis and abdomen are very tolerant of a mass inside them, if it resembles in shape the pregnant uterus.

The difficulties found in operating on these cases are sometimes great. For instance, in one case the rectum and part of the sigmoid flexure were drawn up and intimately adherent to the back of a large fibrocystic tumor, which I removed. It was impossible to strip it off. I had to leave a portion of the capsule attached to the bowel, and get the tumor away as I

best could. There was not enough peritoneum left to cover in the floor of the pelvis. The patient recovered in spite of these drawbacks, and is now well.

Group 7.—The relation of the menopause to fibroids.—There are two points for consideration:

(1) Is the menopause delayed beyond the usual age?

(2) Do the tumors cease to grow or shrink after the menopause?

If a patient comes to us over the age of forty, and her sufferings are not great, she might prefer to go on bearing them if she knew that there would be a cessation in a few years rather than run the risk of hysterectomy.

My experience shows that the menopause is nearly always delayed, and in many cases for as much as five to seven years. This applies particularly to the fibromata with menorrhagia, so that a patient of, say forty-two, may expect another ten years of trouble unless something is done to relieve her.

Supposing the patient is, say fifty years old, will the tumor continue to grow after the menopause? So far as my experience goes, I should say that the number of cases is small where the growth goes on, and is certainly not more than five per cent, if as much.

I find the amount of diminution from the menopause varies much, sometimes amounting to one-half, and in other cases to one-third. It is less in proportion in the case of big tumors, and also in very hard, old-standing tumors having a large proportion of fibrous tissue.

I have been able to trace three cases of fibromyoma treated by electricity which have gone through the menopause:

Case 1.—In 1888 I treated a governess, aged forty-four, at the hospital. The uterus was enlarged, hard and nodular, and reached within two inches of the umbilicus. Menstruation was profuse; lasting fourteen days, and had caused so much anemia that she was unable to earn her living. The uterine canal was distorted, and it was difficult to pass the electrode. Thirty applications were given, and a course of iron at the same time. By March, 1889, she was regular, using only eight diapers. March, 1890, keeping very well. November, 1893, is sometimes irregular, but never loses much; feeling very well. August, 1896, has seen nothing for fifteen months. Age fifty-five. The tumor is much smaller, and can hardly be felt above the pubes. This patient, who came for treatment at forty-four, still had ten years of menstruation before her.

Case 2.—In 1891, a woman aged thirty-five complained of profuse menstruation, which began four years previously. She was anemic. The uterus was found to be enlarged, hard and nodular, and reached to midway between the pubes and the umbilicus. Fourteen applications were given, and the hemorrhage reduced one-half, and her pains disappeared. She kept well for two years. In 1893 the tumor showed signs of growing; eleven applications were given. She kept well for five years, then the tumor began to grow again. In 1899 it reached the umbilicus, and she began to lose more. I saw her in June, 1904, she had seen nothing for eight months; felt well; free from pain. Tumor about the size it was before menopause came on.

Case 3.—A married woman, aged forty-one, was seen by me in 1896, on account of pain and swelling in the abdomen and profuse loss during menstruation. The uterus was hard, nodular and enlarged, and reached within three inches of the umbilicus. Thirty-three applications were given, and the loss reduced to normal. The pains disappeared, and the tumor was reduced in size by one inch. She kept well for two years, when the pains returned, so nine more applications were given. For the next six years she kept well. I saw her in October, 1904; menstruation had then ceased for six months. She was looking well; was free from pain and other symptoms. The tumor, on examination, was found to be reduced in size by one-half.

Inclosed find one dollar for the BRIEF, which makes about twenty-three or -four dollars that I have paid for the BRIEF, for I have been a constant subscriber since 1882, and I like the BRIEF.—B. F. GREEN, M. D., Bloom, Ky.

[Written for the MEDICAL BRIEF.]

Opium Eating and Smoking.

BY DONALD MACLAREN, M. A., M. D.,
London, England.

NO. I.

Some years ago I had the privilege of hearing a paper on Opium, read by the late Surgeon-General Sir William Moore, K. C. I. E., at the Imperial Institute, London. I was subsequently fortunate enough to obtain a copy of the address, and as it is but little known, I have ventured to make an abstract of it, feeling assured that it will prove of interest to the readers of THE MEDICAL BRIEF. It is, perhaps, hardly necessary for me to say that Sir William Moore spent the greater part of his life in India, and was universally regarded as the great authority on everything appertaining to drugs and medicines in that country. I have not slavishly adhered to the original paper, which is of considerable length, but have extracted those portions which, at the present time, seem to be of the greatest value to students of this important subject. In some few instances I have ventured to modify the phraseology adopted, so as to bring it in accord with modern nomenclature. This has been especially the case in the spelling of the names of the active principles contained in the drug. These alterations, however, are few; nothing of importance has been added, and the spirit of the paper has been scrupulously maintained throughout.

Opium is the juice which exudes from incisions made in the head or capsule of the poppy. But this juice is a very complex substance, and different samples vary in composition. The most important constituents are morphine, codeine, anarcotine and thebaine. Morphine and codeine in medicinal doses, are narcotic, while anarcotine possesses considerable antiperiodic powers, or powers like quinine, against periodical fevers, such as ague. Thebaine is a tetanizer, and belongs to the same pharmacological group as strychnine and brucine.

Opium, if taken in sufficient quantity, is deleterious; but this is not the use, it is the abuse, of opium—a remark which is applicable to other things. A person may feel altogether better for a glass or two of wine, and altogether worse for excess. Even a baby may have, and often does have, too much of that harmless fluid, milk, which makes it sick, while it thrives on a smaller quantity. Tea is a fruitful source of dyspepsia and of "nerves," if taken in large quantities or wrongly prepared. So is tobacco. Even rice is a fruitful cause of bowel complaint, if eaten too new. In short, what source of enjoyment is there—nay! what necessary of life—which, though in moderation, harmless or beneficial, is not hurtful in excess? But opium is not only deleterious but also poisonous, if taken in sufficient quantity. As De Quincey observed: "If you take a good deal of it, you must do what is disagreeable to any person of regular habit, viz., die." But many other things which we use contain poisons; tea, tobacco and coffee, for instances. Now, this reminds me of a paragraph in a provincial paper which illustrates the ignorance prevailing with reference to opium. In some papers on the subject I observed that opium, used moderately, was not more poisonous than several other things. The editor said, they were perfectly surprised at Sir William Moore's statement, and triumphantly added, opium not poisonous! Why, an inquest was held last week on a child who died from an overdose of opium.

It is not, however, only about opium that dense ignorance prevails as regards Indian matters. A Bristol divine told his hearers at a meeting in support of Indian missions, that a Zenana (the female quarters of a residence) was a kind of bazaar, and that the unwearied missionaries spent a large proportion of their time within its precincts prosecuting the good work. As ridiculous as if he had said that clergymen in this country lived chiefly in ladies' chambers. At Salford, at a missionary meeting, a reverend gentleman is reported as essaying to describe the manners and customs of the Indians. He said there are social distinctions which are called caste, and one caste will never speak to the other (which is quite untrue). The low-caste men are known as coolies, and their women folk as sweepers, because they are employed to sweep the streets, which again is false. The morality of these people, both men and

women, may be judged from the fact that they go about with their feet and legs bare. Well, so do numerous Scotch girls. Many of the higher class women, the speaker said, may be seen bathing in the tanks, or *talookas*, as they are called. A taluka not being a tank, but a small district. Again this keen observer of Indian life informed his hearers that high-caste native ladies are very chary of showing their faces, and for this purpose they use a large fan called a punkah—as ridiculous as to assert that European ladies use a window-curtain instead of a fan. Those accquainted with India will at once see that either this reverend gentleman was very ignorant, or intentionally deceptive. As with other things, so with opium. The desire for some stimulant always has been a characteristic of humanity. In the earliest times Noah planted a vineyard, and our Lord did not disdain wine. There is little doubt that the *nepenthe* of Homer was hemp, and that when bright Helen mixed the "mirth-inspiring bowl," some part of the hemp plant, "so friendly to the joys of life," was used by the fair compoundress.

From Juvenal, Perseus, and other old writers, we know that men in their time did not live without stimulants. The natives of the South Sea Islands not only ferment the milk of the cocoanut, but have their *ava* or *kava* prepared in a disgusting manner, which need not be particularized. A compound of like nature has been described as used in Tibet. The Englishman drinks gin, beer, port or porter; or, happily, a good many now claret; the German takes beer; the Frenchman absinthe; the Scotchman whisky; the Irishman ether. There is also the morphinomaine, which, it is stated, murders numbers of Parisians.

The tribes of the Central Asian steppes, and the wanderers on the Himalayan slopes, and Easterns generally, finding opium handy to pack and carry, and obtainable economically, being the produce of the adjacent plains, take this form of stimulant. So do Turks, Persians, Arabians, Slavs, Albanians, not a few Greeks, Malays, Hindoos and Chinese. And, what is more, many of these nationalities have been addicted to the use of opium for centuries past.

The reasons why eastern people so generally use opium are various. First, it is a product of eastern lands, as Persia, Turkey and China. Second, the ban placed on spirits by eastern religions must be regarded as a cause. Third, malarious fevers prevail mostly in eastern countries, and opium, since the days of Pliny, has been regarded as a prophylactic against such maladies; and is, indeed, used as such by residents in the fen districts of this country. Fourth, eastern nations are generally less energetic than inhabitants of a colder clime, are more indolently inclined, and opium is just the agent to administer to such attributes. Fifth, a more or less vegetable diet is usual, and often there is scarcity of food. Opium enables people to do with less food than they would otherwise require; the same may be said of tea, as used by many poor people in this country. Last, opium is cheaper than wine or spirits.

Although the use of opium in India dates from time immemorial, the Mahomedan invasions, and the spread of Islamism in India gave great impetus to the habit of using opium. The use of wines and spirits being prohibited, the Mahomedans, finding opium a product of the country, took kindly to the habit. But there are also other reasons for the permanency of the habit. Numbers are born of ill-nourished parents, they work hard under a tropical sun, and they live on meager diet. And this is not so much the result of want of means—for the Indian peasantry were never so prosperous as they are now—but it is the result of climate, habit, custom, food and religious observances. Many, as a consequence of their manner of life, are latently, if not patently, scorbutic, and they are so prone to bowel affections that diarrhea has been called *morbus bengalensis*. They are still more prone to *tup* or *bukkar* (fever), a fever which often does not resemble any of the types described in medical text-books, but is the same character of fever as the fever of prolonged over-exertion, written of by Dr. Knott, of Dublin, or the fatigue fever of Mons. Peter. Again, the working classes of India have few means of recreation. They have not, as working men in England have, theaters, music halls, free libraries, lecture rooms, clubs, parks and gin

palaces. The Indian laboror has one creative comfort—the pipe. It is these conditions, climatic, dietetic, social and country produce which impels to the use of opium, as almost a necessary of life. As a recent writer observes:

"The inhabitants of eastern countries live under conditions of life special and peculiar to them; conditions of climate, race, etc., of which we have no experience whatever. Now for any set of men in Britain to argue that this or that is not needed in India or China because it is not needed in England, seems a very irrational proceeding. This is precisely what the anti-opiumists are doing. How can they pretend to know what a Hindu or a Chinaman does or does not require in the way of a sedative? It is a race question entirely. Anti-opiumists always have the opium-smoking den of East London or New York in their mind's eye. This is about as rational as if a Hindu argued about the alcohol consumption of decent middle-class people in England from reports of the squalor and misery seen around the gin shops of a Liverpool slum."

It is often asked why Europeans in the tropics did not usually take to smoking opium. Now, an European, from his youth upwards, has been in the habit of seeing wine and spirits used, as an Indian from his youth upwards has been in the habit of seeing opium used. And it is a characteristic of Europeans, and especially of Britons, to pursue their habits and customs in whatever country or climate they may be resident. Moreover, smoking opium takes too much time, and is a troublesome business, requiring a pipe, a lamp and instruments to manipulate the opium, or, rather, *chandul* with. For it is not crude opium which is smoked, but a preparation of opium called *chandul*, or *chandoo*, which is a decoction of opium of about the consistence of very thick treacle, and which, for the purpose of sale and smoking, is poured into little china bowls. When a customer comes into an opium shop, he takes a bowl of *chandul*, an iron wire or spoon, and a pipe, and finding a vacant space, reclines on his elbow to smoke. There are two kinds of pipes used. One, the best imported from China, and costing about four rupees. The stem is a hollow tube about a foot and a half long, having fixed on the side nearly at the end opposite the mouthpiece a porcelain bowl. This is conical in shape, the base of the cone being external, and the apex fitting into the pipe-stem. But the base of the cone is closed, excepting a very small orifice in the center. The Bombay-made article, which is used in the greatest numbers, is altogether an inferior implement. There is a straight wooden stem, to the end of which, or to the side of which, is fixed a small porcelain receptacle perforated by a small hole in the base.

Between every two persons there is a small lamp burning. The smoker dips the end of his iron wire, which is flattened like a spoon, into his bowl of *chandul*, and, by twisting it around, causes a small mass of *chandul* the size of a large pea to adhere. This he inserts into, or rather over, the small aperture in the bowl of the pipe described above. Then, putting the end of the pipe-stem into his mouth, he applies the *chandul* to the flame of the lamp. The *chandul* burns and frizzles, and while the *chandul* burns the smoke is drawn up. The morsel of *chandul* is thus disposed of in a few whiffs. There are six or eight smokes in a bowl, and the price varies from four pies to an anna or more, according to the size of a bowl.

Sir William Moore has some personal experience of opium smoking, and says: "Being desirous of accommodating myself to circumstances, and on the principle *flat experimentum in corpore vili*, after considerable trouble in finding a clean pipe, I essayed the process, and had a pretty good dose of *chandul* smoke (which I have often since repeated). But it had no more effect on me than if I had smoked so much chopped hay or tea leaves." He continues:

The anti-opiumists make a great point of the fact that Chinamen, when they smoke opium, lie down to do it, and John Bull is called upon to believe in the terrible power of a stimulant or narcotic (for opium is both, according to the amount taken) which cannot be imbibed standing or sitting. But *chandul* may be smoked sitting or standing, as well as in any other posture. To smoke sitting, however, would require a chair and a table for the

lamp, for which there would not be room in opium houses. The most convenient manner of smoking is to recline, supported by the elbow, and it is convenience, custom, and the fact that poor natives do not use chairs or tables, nor possess them, which has led to the practice of lying down to smoke, and *not* the overpowering nature of the agent. It may be recollected that it was the custom of the Romans to recline at their banquets.

Sir George Birdwood holds *chandul*-smoking to be a strictly harmless indulgence, and he attributes this to chemical changes which the opium undergoes in the combustion when smoked, by which much of the narcotic principles of the opium are destroyed. I fully agree with Sir George Birdwood that the habitual smoking of *chandul* in moderation is not deleterious, and I also say that in many instances it is beneficial. But as everything in this world has a drawback, so *chandul* may be used to excess, when the reverse is the case. And unfortunately, as with liquor, so with opium, there are people who can not refrain from taking more than does them good.

But opium is prepared and smoked in quite a different manner. The opium thus prepared has several names, one of which, very commonly used, is *muddut*. The word *muddut* in the vernacular means "help," "aid," "assistance," and the very name itself may be in some degree accepted as an index of what the natives think of this manner of using opium. *Muddut* is prepared from *chandul* and dried bran. Small balls of it are smoked from the native pipe, known as the "hubble-bubble." As no lamp is used, there is no greater convenience from lying than from sitting, so *muddut* is usually smoked in the latter posture. Contrary to what is seen at a *chandul* house, some at the *muddut* house smoke outside the shop. The explanation has been partly given in the posture for smoking adopted; but another reason is that the smoke from the *muddut* pipe is more dense, and would be more irritating in a confined space. If bran can not be obtained, or when people are very poor, they use cow-dung to mix with the opium. Cow-dung, as all Anglo-Indians know, is extensively used by natives for fuel, as, when dry, it burns very readily.

The worst and most deleterious preparation of opium for smoking is known as tye-chandoo, and is composed of the refuse of opium pipes, the refuse of opium gungah or bhang, and bad tobacco. Tobacco smokers know the difference between good, bad or adulterated tobacco. And respecting wine and spirits, as the wine merchant said on his death-bed, as the best advice he could give to his son: "Remember, my son, wine is made of everything; sometimes, even of grapes." So it is with opium, which is often credited with injurious effects which should be attributed to adulteration. The advice the lamented Sir Andrew Clark gave to a patient, viz.: "Well, if you must drink, drink only the very best wine," is applicable to the use of opium.

Many people do not smoke, but take opium in the shape of *umal-pawnee*, or opium water, which is a solution of opium in water. Others consume the crude opium, usually in the form of pills. This is the most injurious manner of using opium. For when crude opium is taken all the active principles are introduced into the stomach. Opium taken into the stomach lessens both secretions and movements of that organ, and so checks digestion. The opium has to be digested and absorbed before it passes into the system. And there is not the destructive agency of fire, as when it is smoked. Opium is also taken in the form of sweetmeats, and it is sometimes mixed with *charus*, the wax of the *cannabis indica* plant, or with *majun*, an electuary made of charus and spices. Some persons smoke the native *beeree*, or cigarette, which is composed of a small quantity of tobacco wrapped round with plantain leaf, and which may be previously soaked in opium water.

We are told that using opium is wicked, immoral and destructive to health. I have often smoked opium, and I really do not see where the wickedness and immorality come in. Morals, however, differ in different countries. What would be considered immoral in countries where opium is used (the European dance, for instance), does not seem to be so considered in this country.

[Written for the MEDICAL BRIEF.]

Puerperal Insanity.

BY GERSHOM HYDE HILL, A. M., M. D.,

Professor of Mental Diseases in the Drake University College of Medicine. Des Moines, Iowa; Superintendent of "The Retreat" for Nervous and Mental Cases, etc. Des Moines, Iowa.

Mental derangement has, for a long time, been called puerperal insanity, if it appears within six weeks after childbirth, and if confinement seems to be the exciting cause of the trouble.

Etiology.—Instability in the nervous system, and an inherited tendency toward mental alienation, are a predisposing cause to this, as well as to other forms of insanity. Anxiety at the time of labor, and disappointment concerning the outcome, may cause the mind to wander from its moorings; the presence of company in the bed-chamber, or mental disturbance caused in any other manner, may produce a profound effect upon the patient, since the mind is often in a weak and susceptible condition immediately after labor. This is illustrated by unusual irritability in the disposition of lower animals, which are watching over new-born offspring. Inability to secure needed rest and sleep and composure of mind after labor may cause the mental faculties to give way. If the infant is not welcomed by mother or relatives; if mother and child are not suitably and sufficiently cared for at this critical time; if extreme anxiety worries the mind of the mother as to the future welfare of herself or of her child, such conditions may cause the mind to wander.

The physical causes of puerperal insanity are prolonged, painful and exhausting labor; great loss of blood, infection of blood by retained placenta, or any other condition producing sepsis.

Pathology.—There is seldom any gross lesion of the brain or any particular disease in the organ of the mind to produce this sort of derangement. Puerperal insanity is of the functional sort, due either to a neurasthenic condition or an anemic condition of the brain, or to a septic condition of the blood.

Symptoms.—These may be the manifestations of a despondent and hopeless mind, like those which characterize melancholia, or the patient may be excitable and talkative and restless; flighty, exhibiting a mild delirium, and revealing transitory delusions or hallucinations, such as we see in cases of mania; or, in the third place, the variation of the mind from its normal standard may be by dullness, apathy, languor, indifference, lack of interest in self or child or environment, amounting, in some cases, to complete stupidity and sheer listlessness concerning evacuations. Such a case of puerperal insanity would be like one of dementia.

Delirium is seldom a symptom of insanity, but this condition of the mind usually indicates a toxic condition of the blood, and is likely to produce the form of insanity which we call puerperal mania; an anemic condition, or an exhausted condition, of the body is more likely to develop into melancholia or dementia.

Diagnosis.—The fact that the mind of the patient is affected will be readily recognized by the physician if the derangement occurs at the time of labor or immediately afterward, before he is discharged, but if the after-care of the patient is insufficient, or improper, or given by ignorant or superstitious persons, and if the wandering of the mental faculties is insidious in its manifestation, and if the patient is suffering from bodily weakness, or if there is, in fact, something serious to worry about, the impaired condition of the mind in a puerperal case may run along for days and weeks without being appreciated, and without receiving proper attention. If the condition is despondency, it will very properly be charged up to physical weakness, so the fact that it amounts to insanity will not be realized by relatives. Even if the patient is somewhat disorderly, it is hoped and expected that the trouble will disappear soon as the patient gets stronger, physically. If there is present the carelessness of dementia, the mental condition is also charged up to physical weakness, and is expected to soon disappear.

Prognosis.—Since puerperal insanity is, for the most part, a functional disorder, and since, in many instances, there seems to be an adequate exciting cause for the derangement, these cases may be regarded as acute, and curable. Most of them, if

fairly well managed at home, under the direction and medication of the attending physician, will, in a few weeks, or a few months, be completely restored to health, and to a normal condition of mind.

Treatment.—In this disease, like any other, the first indication is to remove the cause of the trouble. The patient must be well-nursed, in a quiet place; preferably by an experienced and judicious person who is not a relative. The child must be weaned, and kept apart from the mother, as far as practicable. The vagina and uterus must be kept clean, and in an aseptic condition; the rectum must be emptied daily; great pains must be taken to have the patient well-nourished with simple, nutritious, easily-digested food. Oftentimes it will be impracticable to administer anything except liquid diet. An abundance of sleep at regular intervals must be secured, and a wholesome influence exercised over the mind of the patient. When a normal condition of the body has returned, then exercise in the open air, diversion of the attention, a resuming of domestic duties, gradually and moderately, should be undertaken.

Such persons are steadied and greatly encouraged by having a nurse who will serve as a co-laborer and companion until the patient is fully capable of taking charge of the affairs of her own household.

If the facilities at home are altogether inadequate and unsuitable; if the husband can not afford to pay the attending physician for frequent visits and the wages of a suitable nurse, then it may be necessary to place such a case of puerperal insanity in a State hospital for treatment, although the patient would recover at home, in a few months, if properly cared for. Women who are strongly predisposed to insanity, and when the puerperal condition is simply "the last straw which breaks the camel's back," or when the physical condition, if bad, and when the cause of insanity, which develops at the time, or soon after the child is born, is of such a nature that it can not be removed, then the prognosis is unfavorable, and the mental derangement is likely to prove permanent.

Equitable Building.

[Written for the MEDICAL BRIEF.]

Some Later Views on Tuberculosis.

BY SOLON R. TOWNE, A. M., M. D.,
Professor of Hygiene and State Medicine in the University of Nebraska.
Omaha, Neb.

Sanatorium methods of pure air, selected food and prescribed exercise are a success in the treatment of tuberculosis, provided the patient is reached sufficiently early in the history of the disease, so that an early diagnosis becomes very essential in the control of tuberculosis and its cure. The physician must be the educator of the general public in methods necessary for the control of such a prevalent disease, and a part of his effort at education must be to let the public know how essential is early diagnosis. He must also inform himself as to the most delicate methods which are required to establish an early diagnosis. This, for himself or the public, is to be no easy task. A patient who is, as he thinks, only a little weaker than usual, or a little bit off his appetite, possibly a little short breathed after exercise, is in a condition which, if it be due to beginning tuberculosis, will require much skill to convince him of the gravity of the situation. If you could show him the tuberculous organism under the microscope as coming from his sputum, he would doubtless be easily convinced. But an early diagnosis must be established very much earlier than by the use of the microscope. To wait for confirmation of the disease by means of the microscope is to wait until possibly the patient is beyond cure; or, if not, cured only at very great effort and expense.

Another extremely difficult matter to be met is the unwillingness of a patient, who, having been treated at a sanatorium and recovered his normal weight, feels perfectly well—yet needs weeks or possibly months of sanatorium regimé honestly and faithfully continued before recovery can be sufficiently established to warrant his return to business or his usual employment. All sanatorium workers appreciate this difficulty, and are often unable to meet it in the individual case. Here again the education of the public is needed in order that the indi-

vidual may be impressed with the necessity for these extra months of sanatorium life that seems to him unnecessary. It has often been observed that too great haste in returning to active life induces a worse condition than before, from which recovery is often extremely difficult if not impossible.

Another interesting result of the recent study of the sources of contagion in tuberculosis is now appearing in medical literature. Dr. Koch, at the London Tuberculosis Congress in July, 1901, as all medical men know, expressed the opinion that there was no communicability between the human and the bovine forms of tuberculosis. He undoubtedly made this statement rather hastily, not having been able to communicate human tuberculosis to the bovine race. A positive difference in appearance is readily noted by all observers between these two organisms. By experimentation upon most animals the bovine organism is acknowledged to be more virulent, yet there is coming to the surface now an opinion—perhaps not fully established—that either organism may be cultivated into other forms more or less virulent, by growth in other animals than those from which it was taken. And that type of organism found in a given bird or animal is simply the one to which the given bird or animal has been exposed. Furthermore, for the last four years, at least, beginning, perhaps, with Dr. Ravenel in this country, tuberculosis in the lung is positively shown to have occurred as the result of taking the organism into the digestive tract alone. Some of these observations have been made by the United States Department of Agriculture. Experiments made by Superintendent E. C. Schroeder and his assistant, W. E. Cotton, would seem to prove that ingested tuberculous organisms are the more frequent cause of tuberculosis of the lung in animals, and they believe with Cadeac, a French investigator, that we are making too much of the inhalation theory, and must substitute for it, as a far more common method of infection, the one here mentioned, through the digestive tract.

According to recent dispatches, as late as February first, the British Royal Commission established in 1901, after the famous statement of Dr. Koch, of Berlin, have recently handed in their report, and it is directly in line with the thought here brought out, that in the majority of cases the infection is through the digestive tract. Our own investigators at the Bureau of Animal Industry at Washington also bring out the astonishing fact that the feces of cattle, whether they are affected with advanced tuberculosis, or only very slightly, as shown by the tuberculin reaction, or if they are only fed the bacilli in drinking water, show the presence of the tuberculous bacilli distributed evenly through the entire length of the digestive tract. In these cases the bacilli being virulent, as shown by producing tuberculosis in inoculated guinea pig, even when inoculated with milk soiled with the feces of cows.

Most certainly would it seem from these conclusions that we have made no mistake in dealing, as we have, so effectually with the tuberculous dairy cow. The only conclusion must be that milk, butter and cheese must not be produced from any dairy cow suffering with tuberculosis.

While we can not ignore in any sense the inhalation theory, and must still believe tuberculosis to be in a sense a house disease, we are compelled by these observations to admit that tuberculosis is also a food disease.

22 Continental Block.

[Written for the MEDICAL BRIEF.]

The Early Diagnosis of Gastric Cancer.

BY MACLAY LYON, M. D.,

Professor Diseases of the Stomach and Intestines, Hahnemann Medical College. Kansas City, Mo.

One of the leading authorities on stomach diseases has said that one per cent of all deaths are due to cancer of the stomach. While this statement is possibly a trifle wild, yet the fact remains that there is an alarming number of fatalities from this disease.

It is in the early and accurate diagnosis of this lesion that the only practical results may be obtained. When the tumor is apparent, cachexia present, emaciation progressing and pain unbearable, it is easy to make the diagnosis, but it is prob-

ably too late to help the patient. It is the early diagnosis which yields results; this, before the tumor is as large as a hen egg, before the patient is as yellow as a pumpkin, and before the offensive breath, rapid emaciation and terrible pain are present to startle you, and to set the patient adrift seeking this one and that one in hope of relief, and, perhaps, falling into the hands of that vulture of medical practice, the advertising quack, who guarantees to "cure cancer or money refunded"—maybe.

To make a diagnosis of gastric carcinoma early in the disease, it is necessary to obtain the family history in detail. Some will give a history of mother or grandmother having died of a disease which was said to have been cancer of the stomach. The patient's weight at the time of examination, and three months, six months, and one year previously, is important. The story of the increasing indigestion and the attacks of pain, condition of bowels; and, in fact, each and every symptom of the patient which is peculiar to the patient, should be noted carefully. With the history at hand, the other points in the diagnosis are much more easily obtained, and more trustworthy.

Gastric cancer may be extremely painful, and may be nearly painless; there may be frequent vomiting of blood-streaked mucus, and there may be little or none.

The presence of lactic acid in the vomit in a proportion of 1/1000, or greater, is a diagnostic sign of value, provided the other conditions agree. This may be found before the tumor can be felt. The condition of the gastric juice is similar to that in chronic gastritis. There will be a localized tenderness in cancer, however, and a progressive emaciation. Microscopical examination, if a careful aspiration of stomach contents is made, will reveal the spindle cell of carcinoma. Its arrangement and grouping will determine largely the progress of the invasion. If a culture be made, the Boas-Oppler bacillus will develop, and can be demonstrated.

The presence of succinic acid in the vomit, which looks somewhat like bile, and is often mistaken therefor, is another link in the chain of diagnosis. It is sometimes present in chronic gastritis, but is found in large quantities in cancer. It is supposed to be a product of mold, and is productive of the formation of much gas in the stomach.

Upon very close examination the cachectic hue may be discovered by the physician long before the patient or family realizes its presence.

By chemical and microscopical examination of the vomit, testing for the size, position and shape of the stomach, locating the point of tenderness by external and internal methods; learning the motor sufficiency and glandular condition of the stomach, and comparing it with the history and symptoms, a diagnosis can be made which will be accurate, but which the patient may refuse to believe. Indeed, the average layman will scoff at the idea of such a possibility, unless he is half dead with the disease, and it has been told him repeatedly.

But when such a diagnosis has been made, there is hope. Surgery may cure the condition; diet, hygiene and the indicated remedy will do much, and the adjuvants, as electricity and light rays, all will help.

I believe that gastric cancer is curable under these conditions.

My plea is for a more careful study of the digestive disorders, and more accuracy in diagnosis. We owe it not alone to our patients to discover the disease in time, but to ourselves. The old adage of a stitch in time, holds good in the early diagnosis of gastric cancer.

Deardorff Building.

[Written for the MEDICAL BRIEF.]

Static Electricity in Traumatic Paralysis.

BY H. P. JENSEN, M. D.,

Professor of Electro-Therapeutics in the Medical Department of the University of Nebraska. Omaha, Neb.

I have chosen this title in order to call your attention to some cases of traumatic paralysis which I have treated by static electricity. Within the past few years I have succeeded in curing about twenty cases of this form of paralysis, but I shall only describe three cases, since the treatment of these has been more or less simi-

lar, and also because the cases herein described have been referred to me by Dr. Jonas, and the diagnosis does not, therefore, depend on me alone.

Case 1.—H. M. B., aged thirty-two, residing at Rawlins, Wyo., engineer by occupation, presented himself for treatment April 14, 1900, with the following history: About eighteen months previous he sustained a severe injury of the left shoulder and arm, while trying to reverse his engine. The lever, owing to some defect, slipped and caught him by the left wrist, forcing him through the cab window, and pulling him back again. It seemed to him as though his arm were being pulled from its socket. On freeing himself from the reverse lever, he found he was unable to use his arm. He was taken to the hospital at Laramie for treatment, where he remained for six months without improvement; after which time he was sent to the hospital at Denver, Colo., remaining there one year. Here he was finally informed that the arm was lost so far as ever obtaining any use of it was concerned, and amputation advised. This advice was refused by him, and, having heard of the Indianapolis Surgical Institute, decided to visit it and make another effort toward bringing about a cure. On his way, he stopped in Omaha to consult Dr. Jonas, who advised him to try what static electricity would do, and he was sent to me.

I found complete paralysis of the left shoulder, arm and forearm. There was great wasting of the left deltoid muscle, as well as all the muscles of the arm and forearm. The muscles would not respond to the faradic or galvanic current, and reaction to powerful static sparks was barely perceptible. The treatment consisted in static sparks for ten minutes, daily, applied to the forearm, arm and shoulder, as well as up and down the spine. This was followed by a static positive breeze for another ten minutes. In ten days, after commencing treatment, the muscles responded fairly well. In three weeks he was able to move the arm and to raise it from the side of the body to an angle of forty-five degrees. In five weeks he could use the arm in feeding himself. On the sixteenth day of June, 1900, he was discharged cured. When I last heard of him he was again doing duty as a railroad engineer.

Case 2.—F. S., aged twelve and a half years. At the request of Dr. Jonas, presented herself for treatment December 22, 1902, with the following history: In June, 1902, she fell down stairs injuring the left elbow. Two physicians were called. One diagnosed a dislocation of the left elbow joint. She was chloroformed, and an effort made to reduce the dislocation by traction. The physician placed his heel in the axilla and manipulated the arm for about two hours. Another physician, called in consultation, pronounced the dislocation reduced. When the patient recovered from the anesthetic she found the arm paralyzed.

When I saw her the arm was much in the condition of Case 1, except that the static sparks gave her pain, and she refused to be treated by this modality. I then tried the galvanic and faradic currents for about two months, with no result. I was about to send her home, when I succeeded in persuading her to again permit the use of the static current. The sparks were painful, and they also failed to move the muscles to any great extent. I then determined to try the wave current; this seemed to act better, and gave hopes of success. One day, in using this modality, I forgot to have the Leyden jars in circuit, and was greatly surprised to find that the muscles could be moved with great facility, and considerable power. After this I used this modified wave current daily, and within three weeks I was gratified to be able to discharge the patient with good use of her arm.

Case 3.—L. F. H., aged seventy years, referred to me by Dr. Jonas, with the following history: The fall previous, while engaged in hauling hay, he attempted to help the team by pushing against the hind wheel. The ground was slippery, and the horses missed their footing, permitting the wagon to run suddenly backward, throwing him under the wheels, injuring his right arm and shoulder. On getting up, he found his arm very painful and useless. When I saw him the arm and fingers were much swollen; movement almost *nil*, and the pain was so great that sleep was impossible. The

treatment instituted in this case was static sparks, given for about fifteen minutes at each sitting, daily. April 29th, three weeks after beginning the treatment, the arm was very much improved; pain was entirely relieved, and some motion was obtained. At this time, hearing that his wife was about to die, he was obliged to hurry home, and treatment was ended for the time being. I did not see him again until last September, when he called to show me that improvement had continued, and to express his gratitude for my services.

My reason for calling attention to these cases is because I believe that this method of treatment is not generally recognized by the profession; or, at least, it is not given the prominence which it deserves.

2804 Harney Street.

[Written for the MEDICAL BRIEF.]

A Plea for the Better Understanding of the Principles of Laboratory Diagnosis.

BY H. M. GOODMAN, M. D.,

Professor of Medical Chemistry and Clinical Professor of Diseases of the Chest in the University of Louisville, Medical Department.
Louisville, Ky.

It is certainly a most deplorable fact that many of our most prominent practitioners are either absolutely ignorant of, or totally indifferent to the methods of laboratory diagnosis. We may account for this to some extent when we consider that many who are still engaged in active practice graduated at a time when our knowledge of this important department of physical diagnosis was in its infancy, but it unfortunately applies to just as many who have had ample instruction under competent teachers. Yet, in spite of such advantages, their lack of interest to properly appreciate the most ordinary tests is simply appalling. While it is true that many new and complicated methods have been introduced, and numerous instruments of precision involving principles difficult to understand have been added to the physician's armamentarium, and it has been discovered that there are other things in the urine that produce exactly the same results with test reagents as the substance whose presence we are endeavoring to determine, or that certain harmless bacteria have many of the morphological characteristics of the pathogenic bacteria, it does not follow that we should cease to continue the search for other means of differentiating them. I doubt very much if the patient would rest the diagnosis of his case with that physician who asserts that he can find albumin by the heat and nitric acid test, or sugar with Fehling's solution, to the exclusion of all other tests for these substances, provided that the patient knew beforehand of the doctor's limited knowledge of the subject. I also very much doubt if the aforesaid patient would willingly submit his case to that practitioner for treatment if he knew that the chemical tests were performed by some medical student or recent graduate. I have, on many occasions, seen physicians when testing urine for albumin, simply boil the specimen; and others with a quasi-scientific flourish, add a few drops of nitric acid and proceed to boil the specimen, seemingly indifferent to the fact that something else aside from albumin may be precipitated from urine by heat alone, or that serum albumin, if present, may, in the presence of nitric acid, form an acid albumin which is not precipitated by boiling the specimen. Other difficult, misleading and improperly conducted tests are daily made for the purpose of ascertaining the presence or absence of sugar. We must bear in mind that there are substances other than dextrose that reduce the salts of copper, or that produce effects similar to those of sugar with other reagents. If the urine contain pentose, which may reduce the salts of copper, form osazones with phenyl hydrazine, does it not necessarily follow that we should be able to differentiate that substance from dextrose by appropriate tests, rather than to make an otherwise healthy person unhappy, and to subject him to unnecessary medical treatment for a condition of disease that does not exist?

If we are to depend upon the ability of others to do this work for us, is it not

easier to submit the specimen for examination to an expert, rather than to a second or third-year medical student, or recent graduate whose ability to differentiate the findings in the urine, both of a microscopical and chemical nature is questionable, and whose knowledge of these findings in relation to the clinical findings of the case is certainly very obscure and immature? Who among us would think of depending upon the knowledge of a student or recent graduate to diagnose a case of typhoid fever, or to tell us whether a certain enlargement in the female abdomen was due to pregnancy or to some condition of disease? Yet we unhesitatingly consign both our reputations and the lives of our patients to the crude manipulations of the student for an "expert" opinion upon the microscopic and chemical findings of the urine, and various other secretions and excretions of the body. The analogy is the same. We are willing to admit that we are unable to make a differential diagnosis of certain lesions in the pulmonary or pelvic viscera, and must, perforce, call to our aid an experienced diagnostician; so should we admit our inefficiency and submit our specimen to the examination of one whose knowledge and judgment we can depend upon.

In my opinion there is no reason why every physician and specialist engaged in the practice of medicine should not have sufficient knowledge of chemical and microscopical technique to enable him to determine the presence or absence of abnormal ingredients, the nature and character of the urinary sediments and the method employed in the staining, and recognizing the various pathogenic bacteria. The time-honored excuse that the busy practitioner has no opportunity for the study of clinical diagnosis is not true, and that man who is willing to hide himself behind this screen of ignorance not only risks his own reputation but jeopardizes the lives of hundreds of innocent persons who intrust their health into his keeping.

I will admit that it costs money; it takes time; it costs many hours of weary research, but in the end it will bring money and reputation to him who endeavors, by his own efforts, to use the methods and instruments of precision to arrive at an exact understanding of his patients' diseases.

Diagnosis should come first; therapeutics and the scalpel afterwards.

817 Third Avenue.

[Written for the MEDICAL BRIEF.]

How the Family Physician May Become a Safe Counselor in Diseases of the Eye

BY JOHN E. MINNEY, M. D.,

Professor of Ophthalmology and Otology in the Kansas]Medical College; Oculist and Aurist A. T. & S. Fe Ry., and the C. R. I. & P. Ry. Topeka, Kan.

The family doctor is called upon to distinguish and treat all ailments of the human body. He sees these cases first—anything and everything, from alopecia to ingrowing toe nail. The family doctor is a man of many parts. It is impossible for him to be an expert in all diseases, but there are a few salient points in the specialties that he can master, and in this way he can become a safe counselor in special ailments. This is particularly true of diseases of the eye.

There are two diseases of the eye which are easily learned; two of the most deadly and destructive to sight, viz.: iritis and glaucoma. A physician who will learn to diagnose these two conditions is a comparatively safe man to treat eye diseases.

There are more eyes lost from the failure to diagnose these two diseases by the general practitioner in their early stages than any other form of eye disease. The damage is done usually early in the disease, and when a specialist is finally consulted, the destruction is often complete. Iritis will form adhesions within a few hours that are difficult to break up. A glaucomatous eye may be permanently destroyed within a few hours, or at least within twenty-four or forty-eight hours. The characteristic symptoms of iritis are pain, photophobia, contracted pupils, turbid aqueous, red, rosy ring around the cornea. The treatment is atropin, locally. In seventy-five per cent of the cases iritis is of syphilitic origin, and a mixed treatment, combined with the atropin is indicated.

In glaucoma we have usually pain, increased tension or hardening of the eyeball; a dilated pupil, rings of light around a lamp flame, temporary loss of sight, with recovery, and then eventually total loss of vision. The treatment is eserin; hot fomentation; if the pain is excruciating, hypodermic injections of morphine. And in both cases rest of the eye.

The prognosis of iritis is good when seen early, even of syphilitic origin. The cause of glaucoma is unknown, and its prognosis always guarded. If eserin does not relieve, a broad iridectomy should be done. In glaucoma the pupil is dilated, which is a characteristic symptom, with hardening of the globe. In iritis the characteristic symptom is a contracted pupil, with red, rosy ring. In glaucoma atropin is strictly contraindicated; it favors the increase of the disease. In iritis atropin is the remedy.

913 Kansas Avenue.

[Written for the MEDICAL BRIEF.]

Rigidity of the Os.

BY J. T. BRYAN, M. D.,

Professor of Obstetrics, Embryology and Clinical Pedology in the Southwestern Homeopathic Medical College and Hospital.
Louisville, Ky.

Rigidity of the os is one of the most, if not the most, frequent causes of dystocia, and to which, with perhaps one exception—the injudicious use of ergot—is due the majority of cases of lacerated cervix.

There are three varieties of rigidity of the os.

1. The anatomical; that form found in miscarriages, premature deliveries and old primiparæ, dependent upon a lack of thorough softening of the cervix.

The diagnosis of this variety rests upon the condition of the cervix as revealed to the examining finger. The os is found thick, tough and heavy, non-sensitive.

The treatment resolves itself into promoting ease and comfort, as far as possible, and safety to the mother, by the use, if needs be, of anodynes; the hot sitz bath, or the hot douche of simple sterile water adds greatly in the softening process. Time and patience are necessary factors in caring properly for this condition.

The second variety of rigidity of the os, the spasmodic, is found especially in those highly nervous patients that have not been taught self-control. The examining finger finds the os, which is more or less hot and febrile, and usually thin, quick to respond to its touch; the most exciting cause is undue manipulation and too frequent examination.

This condition is treated by the hot sitz bath of from fifteen to twenty minutes' duration. Of the internal remedies cimicifuga is indicated by the history of ovarian irritation, rheumatic affections, chorea in early life, vertigo, and occipital headaches. Belladonna is indicated by the congested condition of the head, face; os extremely irritable; hot and dry, and the patient of the full plethoric type, subject to frequent congestive headaches. Pulsatilla adapted to the blonde phlegmatic individual; tearful and despondent, and who is subject to catarrhal discharges, especially if there be a history of otorrhea and conjunctival troubles in childhood. Chamomilla for the mean, spiteful, impatient individual. The bryonia patient is similar in her mentality to the chamomilla patient, but is more determined, and often vindictive. She gives you a history of constipation, and rheumatic tendency affecting the fibrous tissues.

These remedies I prescribe in the 3x potency, with the exception of chamomilla, which I administer in the 30th. I would not say that these remedies invariably cure the condition, and are all that is needed, for, at times, I am forced to resort to chloroform inhalation, or to belladonna or opium suppositories.

The third variety, the pathological, embraces the rigidity due to any pathological condition of the os, or cervix, such as hypertrophic elongation, contractions from cicatrices, small fibroids, atresia or contractions from escharotics, cancer, etc.

The diagnosis is easily made from the physical condition present and revealed to the examining finger. The treatment is largely mechanical; dilatation being assisted by the Barnes' water bag, or the fingers, either before or after incisions. Seldom, however, is it necessary to incise the os. Where you have a cancerous con-

dition to deal with incision is made through the healthy portion of the cervix, severe hemorrhage being less likely at this point than through the diseased portion. In prophylactic treatment I administer such remedies as cimicifuga, caulophyllum, pulsatilla and sepia during the last weeks of pregnancy, prescribed upon their specific indications; these will do much to prevent the development of the spasmodic variety, to favor vital dilatation, and to that extent prevent the anatomical. I question the effect of these drugs upon the pathological form.

Gaulbert Building.

[Written for the MEDICAL BRIEF.]

Complications and Accidents Following Tooth Extraction.

BY CLYDE DAVIS, B. S., M. D., D. D. S.,

Dean of Lincoln Dental College Associated with the University of Nebraska; Professor of Operative Dentistry in Same.
Lincoln, Neb.

Fracture of Other Teeth Through Striking Them With Forceps.—When a tooth which you are attempting to extract suddenly loosens, it is unfortunate if the forceps come in contact with other teeth, and their injury could only result through carelessness. If the necessary amount of caution is taken beforehand, it can be avoided. This accident is most likely to occur in the extraction of the third inferior molars and inferior bicuspids, as the direction of the force necessary for their extraction is in a line which would bring the forceps against these upper teeth, if the tooth is suddenly loosened.

One of the principal precautions is to see that the patient's head and the muscles of the arm you are using are fully under control. The muscles of the arm are under better control when the tooth to be extracted is near the operator's body. Another precaution is to take a piece of flexible dark-colored rubber tubing about three inches long, and of about one-half to three-quarters-inch bare. Split this with a knife half its length. Slip the rubber tubing over the forceps, allowing the unsplit portion to cover the hinge of the forceps, and part of the beaks, and allowing the split portions to extend upon the handles of the forceps separately, wrapping them securely to each handle with strong linen or silk thread. Thus wrapped, if the forceps should accidentally strike the upper teeth they will not be fractured.

Laceration of Soft Tissues.—The laceration of soft tissues of the mouth may be prevented by severing them at the neck of the tooth from the alveolar border, and placing the forceps beneath this. I do not think it necessary to in any case impinge upon or pinch the soft tissues with the forceps. If room is needed for the beaks of forceps, sever the soft tissues from the periosteum, and leave them intact to form flaps for covering the wound.

There is also danger of pinching the lips with the hinge of the forceps. The joints being made at right angles, and shutting very closely, but little force is required to entirely sever the impinged portion from the lip. This can be avoided by seeing that the lips do not touch the forceps at this point.

There is danger of still another injury to the lips by allowing them to overlap the other teeth, and by pressure with the fingers or handles of the forceps, or through the teeth suddenly leaving the socket, striking the teeth in the other jaw, with the lips between. A little care on these points will save great annoyance to patients and chagrin to the operator.

After Pains of Tooth Extraction.—When the nervous system has been wrought up to a high tension through continued pain, the mere removal of the teeth, thereby severing the nerve of its pulp near the apical foramen, does not, in all cases, immediately relieve the pain, and patients will sometimes complain of toothache after the tooth has been removed. Sometimes this will last only a few moments, in other cases for hours, and patients will complain of certain pains in the process formerly occupied by teeth, after wearing an artificial denture for years. They declare these pains identical with those suffered when they were possessed of these organs.

Such phenomena, with reference to the nerves, are also illustrated by what surgeons tell us of persons having aches and pains which seem to be in their fingers

or toes long after these members have been amputated.

Where the pain is long continued there is little to do but resort to general treatment. Most frequently troubles of this nature are of short duration, lasting but a few moments, or hours, at most. Great relief may be given by injecting into each root-socket a few drops of a preparation known to the dental profession as Heaven's cordial. The formula is as follows:

℞ Alcohol ..... 1 ounce.
Chloroform ..... 2 ounces.
Sulphuric Ether ..... ¾ ounce.
Gum Camphor ..... ½ ounce.
Laudanum ..... ⅛ ounce.
Oil of Cloves ..... ½ drachm.
M.

This will also be found to be a good toothache remedy.

Should Teeth be Extracted While Aching?—Some of our authorities advise that we should not extract teeth while they are still aching, having in mind some of the very troublesome cases of neuralgia that sometimes follow the extraction of an aching tooth.

It is generally believed by the dental profession that this is improper advice and poor practice, since there seems to be no better time than the present for the removal of a tooth which can be made of no further service. Advice to allow an aching tooth to remain in the mouth while you attempt to stop the pain, will not be charitably received, and in most instances the patient will go directly from your office to another, and have the tooth removed. The cases are so few in which the pain is prolonged beyond a reasonable length of time, that we do not hesitate to extract a worthless tooth at any time, unless the patient's health would forbid. The fact that a tooth is badly ulcerated and seated in a pus pocket, is no more reason for allowing it to remain than you would refuse to lance an abscess on the plea that you desired nature to take its course. In a bad case of the formation of acute alveolar abscess the tooth itself is almost invariably the excitant cause. The sooner the cause of the pathological disturbance is removed the less far-reaching are the ill-results.

Taking Cold in the Teeth—Every practitioner is asked, after the extraction of a tooth, if there is danger of taking cold in the wound. It is also the belief of the laity that when they have the formation of an acute alveolar abscess, or the revival of a chronic one, they have taken cold. Patients, upon your taking exception to this view, will say that their physician said such was the case. This is not a wise plan, for it advises patients directly opposite to the truth, for no physician believes that an alveolar abscess is the result of taking cold.

Resorption—As in the case of other hard tissues of the body, absorption of the alveolar process is of two kinds: physiological and pathological. Physiological absorption of the hard tissues is that absorption resultant upon the performance of an organic function in an organism in a state of health, the products of which are excreted. As an illustration, I would cite the removal of the alveolar process, retaining the temporary teeth, which is afterwards replaced by the permanent process; also the removal of the permanent process after the permanent teeth have been removed, leaving the jaw much smaller, as it is found in extreme old age.

Pathological absorption of the hard tissues is that resultant upon a pathological action in an organism in a state of disease, some of the products of which are exfoliated. As an illustration, I would cite the removal of the hard tissues in the body resultant upon a destructive pathological action, such as the formation of abscess within a bony cavity.

The absorption of the process around the roots of the deciduous teeth, as well as the absorption of the roots themselves, is physiological absorption, and just as long as this process continues, with the adjacent tissues in a state of health, it is normally accomplished. If, for any reason, physiological absorption is interrupted by a pathological condition, physiological absorption ceases. This explains why the roots of temporary teeth are not always absorbed. For, if the pulp in a temporary tooth dies, there is always a little inflammation, or, perhaps, an abscess at the base of the root, and nature ceases her work, and any subsequent absorption, either of the alveolar process or the roots of these temporary teeth, would be pathological. The oncoming permanent teeth may check physiological ab-

sorption in the deciduous teeth by pressing upon or coming in contact with the remaining roots of the temporary teeth, and again nature ceases her work. For this reason I do not believe in the theory advanced by some authorities—that a temporary tooth should not be removed unless it is loose or decayed. Allow this in nowise to interfere with extraction. If the patient has arrived at the proper age, and this is the next tooth in order to be replaced, extract it, paying no attention to the lack of absorption, as some pathological trouble may have checked it.

The absorption of the alveolar process after the removal of a permanent tooth, or the entire denture, is physiological, and nature's way of grading up the mouth to an even and level surface. I do not think the Creator, when constructing the architecture of the oral cavity, had in his mind the wearing of an artificial denture, and he has provided for the possibility of leaving the mouth in such a condition that food can be masticated. This could only be accomplished by the removal of the sharp portions of the alveolar process left standing after the loss of the teeth, and then thickening the membrane over the alveolar ridge.

Therefore, we have the drawing away of this, which can be called the superstructure of the maxillæ, as a foundation for the support of these useful organs.

Richards Block.

[Written for the MEDICAL BRIEF.]

Homeopathic Indications for a Few of the More Important Drugs in Eye and Ear Diseases.

BY ELBERT B. SWERDFEGER, M, D.,

Professor and Demonstrator of Anatomy; Chief of Eye, Ear, Nose and Throat Clinic. Denver, Colo.

The men who are the most successful in their practice in this specialty are those who give the greatest attention to detail, and prescribe for their patient as a complex being, rather than as an individual consisting only of eyes and ears.

In order to illustrate what I wish to convey, I will describe a case at the clinic some years ago: Mrs. N., married, aged thirty-eight, with the following history: For the past four or five years had several ulcers on one or the other eye; each ulcer making its appearance following a death in the family, or grief or anxiety. Upon examination I found a deep ulcer on the outer portion of the cornea of the right eye, with photophobia, marked lachrymation, excruciating pain. The present attack followed the attendance on a very sick child. Patient always worried greatly. She was given the regular routine local treatment for such conditions. Internally, she was given ignatia. This drug was not given because it has such marked effects upon the eye, but because it is one of the greatest known remedies for the relief of morbid conditions, whether found in the eye or elsewhere. The woman was cured in a few weeks, and for over three years she has had no return of the trouble.

In taking up drugs under a special heading, one can give but a few of the important indications that have been found clinically to be of the greatest use.

Agaricus.—This drug produces jerking, twitching and trembling of various muscles or sets of muscles, also burning and itching. Hence we find it useful in diplopia, asthenopia from prolonged strain, spasms of accommodation, twitching of eyelids and eyeballs. There is no drug in our *materia medica* which equals it in the treatment of after-results of frost-bitten ears or toes, where they itch and burn.

Allium Cepa.—We have all worked over a strong onion, and had our eyes filled with non-excoriating tears, and our nose secreting acrid discharges. When we find such a condition existing in a patient, allium cepa will relieve it. We frequently find the above conditions in hay fever.

Apis Mel.—Those of us who have been stung by a bee know there is a great deal of stinging, as well as burning and edema with this drug. In the eye it is useful when the lids are edematous, are everted, inflamed, sting and burn; conjunctiva, bright red and puffy. Hot lachrymation, sudden, piercing pains. Keratitis, with intense chemosis of ocular conjunctiva.

Arg. Nit.—A deep-acting drug, with marked effects on the whole nervous system, and on the mucous membranes. Patient has an old, pale, bluish appearance.

There is blurred vision, photophobia; worse in a close, warm room. Inner canthi swollen and red. Purulent ophthalmia, having an abundant, thick discharge, eyes shifting. One of the very best drugs in ophthalmia neonatorum.

Aurum Met.—Here is a drug that attacks the blood, glands and bones, and produces a condition simulating mercurial, or syphilitic poisoning. This drug produces a morbid condition of the mind. Patient is hopeless, despondent; talks and thinks of committing suicide, and seeks every opportunity to accomplish self-destruction. All of the symptoms of this drug are worse in cold weather, and at night. As this drug attacks the bones, it is one of the best drugs in caries of the ossicles and the mastoid. Frequently useful in obstinate fetid otorrheas, whether following grippe, scarlatina, or from any other cause. In the eye we find extreme photophobia. Either diplopia, or only the lower half of objects visible. Vascular cornea. Pains seem to come from without and pass inward.

Belladonna.—A drug that produces active congestion. On the nerves, it produces a perverted condition, with twitching, convulsions and pains. In any typical belladonna condition, there is always a hot, red skin, flushed face, glaring eyes, dilated pupils, throbbing carotids, mental excitement. Pains come and go suddenly. In the eyes there are throbbing, dilated pupils; eyes feel swollen and protruding, diplopia. In the ears we find bulging membrana tympani, otitis media, throbbing, beating pains; all of which are worse with the head down, or the patient lying down. Hearing very acute. The child cries out in sleep.

Calcareas.—These are some of the chief tissue remedies which are especially indicated in tardy dentition, with the troubles incident to that period. Bone disease, nonunion of fractured bones, anemias, chronic wasting diseases. These symptoms are aggravated from changes in the weather, and generally have a numbness and a crawling or creeping sensation. Patients perspire easily; enlargement of glands; in other words, a nice picture of a scrofulous condition. In eye diseases, or any condition which may present itself having the above set of symptoms.

Capsicum.—We find this drug most often indicated in persons of lax fiber, or weak from diminished vitality. They are generally persons who are fat, indolent and opposed to physical exertion. Mind easily disturbed. In the ears we are apt to get a burning, stinging, swelling pain. Mastoiditis, tenderness over the petrous bone. Extremely sensitive to touch. Added to this there are the above general symptoms, and usually a general chilliness.

Conium.—A drug rendered classical by Plato's graphic description of its employment in the death of Socrates. If taken to excess, it produces an ascending paralysis, which ends in death by failure of respiration; sudden loss of strength, of walking; these conditions are frequently found in the aged, or those whose vitality has been depleted by some disease. In the eyes we have photophobia, excessive lachrymation; worse by artificial light; paralysis of one or more of the ocular muscles; inflammation of the conjunctiva, or cornea. A peculiar thing is that a slight laceration or abrasion will cause the most intense photophobia and lachrymation.

Graphites.—This drug is an antipsoria. It is especially active in patients who are stout, fair complexioned, with a tendency to constipation. Fat, chilly and easily exhausted; indication for graphites.

Eyes.—Ophthalmia, with intolerance of artificial light. Eyelids red and swollen. Blepharitis marginalis. Eczema of lids. Fissure of canthi, particularly the outer. Zincum—the inner.

In the ears there is dryness of inner ear, cracking when chewing; hissing. hardness of hearing. Thin, white, scaly exfoliation covering membrana tympani. Fissures and eruptions behind the ears, which ooze out a thin, sticky, glutinous exudate. Patient worse at night. If a woman, better during and immediately after menstruation.

Hepar Sulph.—This drug suits those of a scrofulous or lymphatic constitution. There is always great sensitiveness to all impressions. This drug is always thought of, either where pus has formed or where it looks as though it would occur. If given early enough, will very often abort the pus formation. Under the general

symptoms there is generally chilliness, hypersensitiveness, pains are splinter-like; craving for sour and strong things. A feeling as if a cool wind were blowing on the part affected. Hepar is a good drug to be used in corneal ulcers, iritis, purulent conjunctivitis, with marked chemosis. Profuse discharges, great sensitiveness to touch and air. Objects appear red, and too large. This is as near a specific for hypopyon as any drug is a specific for any morbid condition—a fact I have seen verified time and again. The ears have a thick scurf on and behind them. In chronic suppurative otitis media the pus is thick and very offensive. All conditions are *worse* from dry cold, from mercury, touch or lying on painful side. Better in damp weather, warmth and eating.

Kali Mur.—This being a potash, we find the characteristic weakness, anemia, soft pulse, coldness, general depression, sensitiveness to all climatic changes and intolerance to cold weather, the same as all of the potashes.

This drug is particularly useful in catarrhal affections which have fibrinous exudations and glandular swellings. White or gray coating on base of tongue. Expectorations thick, white and tenacious, are strong indications.

In the ear, this is one of the chief drugs in treating catarrhal conditions. All lymphatic glands around the ear swollen. Membrane tympani has a whitish appearance. Tinnitus aurium with snapping and noises in the ear. Kali mur. and merc. dulc. are two of the most prominent drugs in treating chronic catarrhal conditions, and their local indications are quite similar, consequently one needs to be guided very largely on general instead of local appearances.

Ledums.—When this drug is indicated we always find a lack of animal heat, and at the same time find that artificial heat is nearly, if not quite, unbearable. In contused wounds, with marked extravasation of blood, this will be found particularly useful. Injuries to the lids, conjunctiva, aqueous or vitreous, where there is this marked extravasation, will be very much benefited by being given ledum. This I have seen demonstrated numbers of times.

Lycopodium.—Almost invariably when this drug is indicated there will be found to be some involvement of urinary or digestive apparatus. Symptoms usually begin on right side, and extend toward the left, and are worse from four to eight P. M. Particularly useful in persons intellectually keen and musculary weak.

In the affections of the eyes we find it ranks first in number of cases cured of hemeralopia. Likewise, it is the drug of first choice in hemiopia, in which only the left half of the object is seen.

Merc. Dulc.—(Calomel).—This is one of the most used, also the most abused, drugs that we have in our *materia medica*, because every organ and every tissue in the body is affected, to a greater or lesser degree. Whenever calomel is indicated the symptoms are worse at night, from warmth, from damp, cold or rainy weather, and when perspiring.

In catarrhal conditions of the eye and ear, this is a handmaid of kali mur., and while the local conditions of the two drugs are quite similar, there need to be no mistakes made in the prescribing of either, if the general symptoms are taken into account.

Mezerium.—An important drug for neuralgia, especially about face and head. An extremely indicative symptom is: "The ears feel as if too open; as if the tympanum were exposed to the cold air, and it blew into the ear." This symptom has been repeatedly confirmed by every careful prescriber.

Natrum Mur.—Chilliness, great emaciation, weakness and anemia are all prominent symptoms. All mucous secretions richly charged with salt. The eyes feel bruised. Headaches of students. Muscular weakness being prominent, we find it useful in exophoria, when asthenopic symptoms have not been relieved by the wearing of properly-fitted glasses. This, I have verified many times. Letters run together; see sparks, profuse acrid lachrymation. If accommodative asthenopia, ruta is the drug most likely indicated.

Paris Quadrifolia.—A drug of not very wide range of action; the head symptoms being most marked. Eyes have "pain in the eyes as if pulled into the head; sensation as if thread drew from the eye into

the middle of occiput." This is rather an uncommon symptom, yet, when met, gives the key to a remedy which gives definite results beyond the relief of the symptoms alone. While yet in college I saw my preceptor, Dr. David A. Strickler, verify this at different times.

Psorinum.—Debility, independent of any organic disease. Lack of reaction when well-chosen remedies fail to act. Psorinum patients and all their secretions have a filthy odor. Skin looks dirty, and has intolerable itching.

Eyes.—Agglutination of lids. Blepharitis. Chronic ophthalmia that constantly recurs. Secretions, acrid and foul.

Ears.—Raw, red; oozing scabs around the ears. Offensive discharge from eczema around ears. Intolerably itching. In chronic suppurative otitis media, where the pus is so offensive that it is sickening to the aurist, I well remember my first verification of this last statement. It was in a boy about six years old that had a discharging ear for nearly a year, which so far had resisted all apparently well-directed and indicated treatment. This boy began to improve in a very few days after beginning to take two tablets, t. i. d. of psorinum, 30x. Since that time I have experienced a number of similar cases, with like pleasing results.

Pulsatilla.—A drug could be no better named than this. Any one that has ever seen the "wind-flower" swaying in the breeze, need not be very imaginative to think of a patient as being changeable, contradictory, sad, laughing, crying; when talking, begins weeping. Patient is thirstless, peevish, chilly; better outdoors. Worse from rich, fat food, though always craving sweets and pastries.

Eyes.—Discharge thick and yellow. Lids inflamed, nightly agglutination. Styes, especially of upper lids. Sub-acute conjunctivitis; particularly if patient is suffering from some gastric disturbance.

Rhus Tox.—Patient always shifting position. Worse in cold, wet, rainy weather, at night, during rest, when lying on back, or right side. Better, warmth, dry weather; motion, or when changing position.

Eyes.—Orbital cellulitis, pustular inflammations, phlyctenulas conjunctivitis. Iritis, after exposure to cold and dampness, especially when there is any rheumatic tendencies.

Ruta Graveoleus.—This drug acts upon the fibrous tissues of the body, periosteum, cartilages and tendons.

Eyes.—Here we find asthenopia from weakness of the ciliary muscle, accommodative asthenopia, which is usually shown by sensation of heat and fire in the eyes and an aching while reading. "Aching in and over the eyes." When such cases do not receive the relief expected from glasses, ruta will relieve a large percentage of them. Very recently I had a number of cases, all coming at nearly the same time, on whom I proved the above statement. In the eyes ruta corresponds closely to conium, which has more photophobia; to argentum nit., which has more of a catarrhal conjunctivitis. It applies to accommodative asthenopia, thus differing from natrum mur., which applies to muscular asthenopia, especially a weakness of the internal muscle.

Zincum.—This drug acts profoundly upon the cerebro-spinal system, producing a condition of erythrism in the brain, medulla oblongata and the spinal cord.

Eyes.—Inflammation and redness of conjunctiva; worse in inner canthi. Cases that show a tendency for the conjunctiva to become involved near the inner canthi are almost surely relieved by zincum. This drug has a great reputation for its beneficial effects in cases of pterygium, a fact that I have never verified.

Masonic Temple.

New Medical College Opened.

The Hippocratean College of Medicine, one of the few medical night schools in the United States, was formally established recently, with appropriate ceremonies, in the College building, 3412 Morgan street, St. Louis. The officers of the college are: Doctors Joseph E. Chambers, President; George Feigenbaum, Vice-President; Solomon S. Kohn, Treasurer; Emory Lanphear, Dean; A. H. Ohmann-Dumesnil, Vice-Dean; Albert W. Koch, Secretary.

[Written for the MEDICAL BRIEF.]

A Modification of the Tait Operation.

BY N. O. HARRELSON, M. D.,
Gynecologist to St. Joseph's Hospital; Surgeon-in-Chief, Swedish Hospital.
Kansas City, Mo.

There are probably no two surgeons in practice who follow out exactly the same technique and modifications in this rather delicate branch of plastic surgery, yet we get our ideas from the same fundamental principles, and all obtain results more or less perfect.

During the time I have been engaged in this special field of surgery, my methods have been revolutionized numerous times.

Briefly, the procedure that I have found most simple and practical in the majority of cases, consists of a modified Tait, so far as the flap-splitting is concerned. When the mucous membrane flap has been dissected up and the upper margin is slightly elevated, it presents the appearance of an ellipse. It is well to select the limits of the flap by the degree of closure you wish to make. I usually go above the carunculæ myrtiformis, because they have already been displaced from their original positions by the force causing the tear. In this method the anatomy of the Bartholin glands is practically ignored, and I have never seen any complications resulting from traumatism.

After the flap is dissected up, grasp same in the center line of the body with long tissue forceps, and push it backward and downward into the vaginal canal, thereby correcting the rectocele. The lower flap is grasped in the same manner, and retracted downward and backward. The wound that once had the appearance of an ellipse, now assumes the shape of two equal triangles, with a common base in the median line of the body. On either side of this denuded area, you will observe in plain view the fragmentary remains of the principal muscles that go to form the perineal body, among them being the levator ani, and anal sphincter, provided the tear extends to that point. The others are of small importance.

By this method of dissection, these muscles and their associates are thoroughly exposed, which enables you to place a through-and-through suture. It is immaterial at what point you take the initial suture.

I grasp on either side, with a small tenaculum forceps, the retracted remains of muscle and fascia, including the anal sphincter, if it is involved in the tear, and use a continuous catgut suture, which is buried, until the torn remains of muscle and fascia are thoroughly brought in apposition in the median line. This obliterates the ever-present rectocele. After that, or before, as the operator chooses, I run sweep sutures of silk-worm gut through the skin and muscle to, but not through, the vaginal mucous membrane, which is shoved into the vagina by a forceps held in the hand of an assistant.

The only reason for using the silk-worm gut suture is simply to support the buried catgut suture, upon which the success of the operation absolutely depends. All operations upon the perineum, during the child-bearing period, which destroy tissue should be discouraged and never employed before the menopause. The result of any successful operation should be the restoration of function, doing away with cystocele, thereby aiding in the relief of constipation, curing vaginal subinvolution by restoration of circulation and relief of tension.

I have employed the following operation over two hundred times in my own practice, and in that of others, and believe it to be the most practical method with which I am familiar.

After-Treatment.—I use once a day a vaginal irrigation of an antiseptic solution, permitting the patient, after the first twenty-four hours, to pass urine at will, having the nurse to douche the wound externally after each urination, to avoid the dangers of infection. The nozzle used should not be too large; a No. 10 female glass catheter, attached to a fountain syringe, is the most practical. I have never observed any ill-effects from the patient passing urine over the wound after twenty-four hours. I never remove the sutures before the twelfth or sixteenth day, because, if they are removed too soon, too much tension is thrown on the buried sutures, causing the torn muscles to separate, and leaving a concealed tear covered by the skin, and your patient is then in no better condition than before you operated.

Rialto Building.

Gastrotomy.

The death of the celebrated surgeon, Dr. Bernays, suggests to us that a reproduction of a justly celebrated case—in fact, the introduction of his career as a fearless and successful surgeon—would not be amiss, as many of our readers of today were not then in practice. This article was written for THE MEDICAL BRIEF, and published January, 1887:

Gastrotomy for the Removal of a Swallowed Knife—Recovery of the Patient—With Illustrations.

BY AUGUSTUS C. BERNAYS,

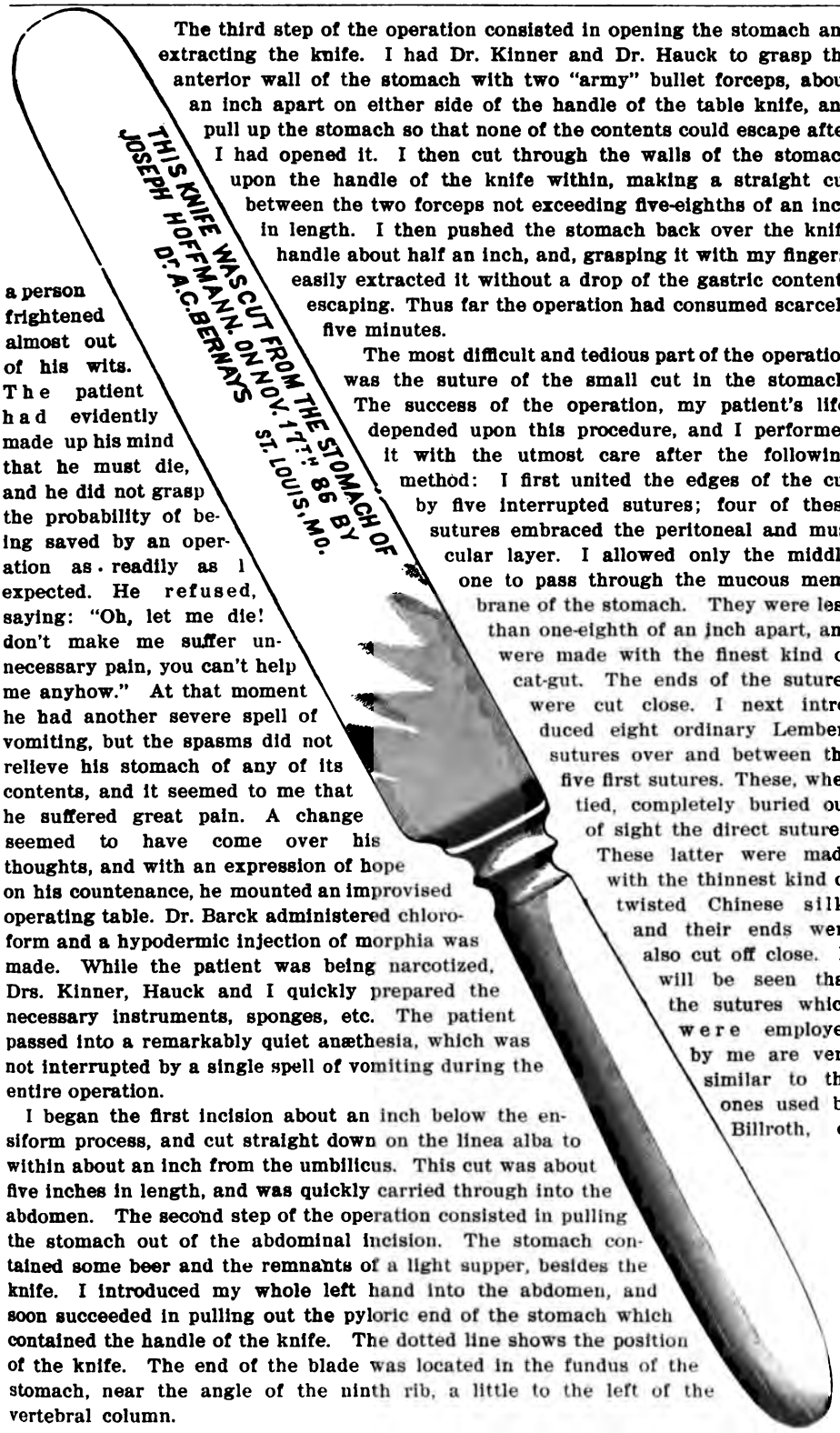
A. M., M. D., Heidelberg; M. R. C. S., England F. R. M. S., London; Member German Society Surgeons, Berlin; Professor of Anatomy St. Louis College Physicians and Surgeons.

In compliance with your request, I submit the following report of a most remarkable case for the benefit of your many thousands of subscribers:

Joseph Hoffmann, a German tailor, aged thirty-eight, was amusing his wife and children with various tricks and funny performances, at his home, No. 1207 South Broadway, on the evening of November 17, 1886. They were sitting around a table and, being somewhat exhilarated, Hoffmann intended to close his entertainment by his *chef d'œuvre*, of sword-swallowing, in which performance he is an expert. He had frequently pushed pokers, canes and handles of ladles down his gullet before, but on this evening he chose an ordinary caseknife (see Fig. 2, which is a fac-smile of the one used). He intended to make the knife disappear in his throat and then pull it out with his fingers, after the spectators had sufficiently admired his skill and daring. The first act of this program succeeded admirably, the artist pushed the knife down into his œsophagus, handle foremost, his chin being raised and head thrown back, so that the canal into which the knife was pushed formed a straight line. Suddenly, while in this position, the knife escaped the control of the performer. Amid the agonizing screams of the family and of the victim, the knife was carried down into the stomach by the contractions of the pharyngeal and œsophageal muscles. It was swallowed exactly in the same way as any other substance which is introduced into the fauces. The screams in Hoffmann's dwelling attracted the neighbors and the policeman on the beat. The latter telegraphed for an ambulance, intending to remove Hoffmann to the City Hospital, whilst others summoned medical aid. The first medical man to arrive was the family physician, Dr. Hugo Kinner, one of the busiest practitioners of the South Side. After he had assured himself of the con-

dition of his patient he quieted him, and stepping to the nearest telephone, sent for me. Dr. Kinner and I were soon in earnest consultation by means of the electric current, and it was settled that I should drive down to Hoffmann's residence, see him at once and come prepared to operate. The well known oculist, Dr. Chas. Barck, and Dr. Eugene Hauck, accompanied me to the scene of the accident.

When we arrived at the house, Hoffmann was having a violent spell of vomiting, and presented the appearance of



The third step of the operation consisted in opening the stomach and extracting the knife. I had Dr. Kinner and Dr. Hauck to grasp the anterior wall of the stomach with two "army" bullet forceps, about an inch apart on either side of the handle of the table knife, and pull up the stomach so that none of the contents could escape after I had opened it. I then cut through the walls of the stomach upon the handle of the knife within, making a straight cut between the two forceps not exceeding five-eighths of an inch in length. I then pushed the stomach back over the knife handle about half an inch, and, grasping it with my fingers, easily extracted it without a drop of the gastric contents escaping. Thus far the operation had consumed scarcely five minutes.

The most difficult and tedious part of the operation was the suture of the small cut in the stomach. The success of the operation, my patient's life, depended upon this procedure, and I performed it with the utmost care after the following method: I first united the edges of the cut by five interrupted sutures; four of these sutures embraced the peritoneal and muscular layer. I allowed only the middle one to pass through the mucous membrane of the stomach. They were less than one-eighth of an inch apart, and were made with the finest kind of cat-gut. The ends of the sutures were cut close. I next introduced eight ordinary Lembert sutures over and between the five first sutures. These, when tied, completely buried out of sight the direct sutures. These latter were made with the thinnest kind of twisted Chinese silk, and their ends were also cut off close. It will be seen that the sutures which were employed by me are very similar to the ones used by Billroth, of

a person frightened almost out of his wits. The patient had evidently made up his mind that he must die, and he did not grasp the probability of being saved by an operation as readily as I expected. He refused, saying: "Oh, let me die! don't make me suffer unnecessary pain, you can't help me anyhow." At that moment he had another severe spell of vomiting, but the spasms did not relieve his stomach of any of its contents, and it seemed to me that he suffered great pain. A change seemed to have come over his thoughts, and with an expression of hope on his countenance, he mounted an improvised operating table. Dr. Barck administered chloroform and a hypodermic injection of morphia was made. While the patient was being narcotized, Drs. Kinner, Hauck and I quickly prepared the necessary instruments, sponges, etc. The patient passed into a remarkably quiet anæthesia, which was not interrupted by a single spell of vomiting during the entire operation.

I began the first incision about an inch below the ensiform process, and cut straight down on the linea alba to within about an inch from the umbilicus. This cut was about five inches in length, and was quickly carried through into the abdomen. The second step of the operation consisted in pulling the stomach out of the abdominal incision. The stomach contained some beer and the remnants of a light supper, besides the knife. I introduced my whole left hand into the abdomen, and soon succeeded in pulling out the pyloric end of the stomach which contained the handle of the knife. The dotted line shows the position of the knife. The end of the blade was located in the fundus of the stomach, near the angle of the ninth rib, a little to the left of the vertebral column.

Table of Gastrotomies for the Removal of Foreign Bodies.

Case No.	Name of Operator.	Literature and Bibliography.	Patient—Age and Station.	Nature of the Foreign Body.	Length of time the object was retained in the Stomach.	Physical Condition of Patient before the Operation.	THE OPERATION.	AFTER-TREATMENT AND REMARKS.	FINAL RESULTS.
1	DANIEL SCHWABE, in Kœnigsberg, Prussia, 1635.	Baldinger's New Magazine for Physicians, Vol. XIII. 1791. Page 567 *Berlin Clinical Weekly*. No. 7, 1883. Hart Knochs Old and New Prussia. 1684.	A. Gruenheyde, farmer, 22 yrs of age.	Table knife, 18 ctm long, 15 ctm. broad (6¼ in. in length).	41 days.	No serious inconvenience.	Incision one and a half inches below and parallel to the ribs on the left side. Stomach pulled up by means of a curved needle Stomach cut through on the point of the swallowed knife. The incision "snapped shut" after the knife had been extracted. Abdominal incision closed by five sutures. Operation without anæsthetics	Removed external sutures on second and third day. Bloody urine, and stools during first days. Wound washed with wine—strict diet during two weeks. Wound entirely healed during this time.	The patient lived many years, enjoying perfect health.
2	TILANUS, of Leyden, 1848.	Ort, Diss. contin. casum gastrotomiae cet. Lugduni, Batavor, 1853 Adelmann, *Prague Quarterly Review of Practical Medicine*, Vol. 131, 1876, page 80.	Insane girl in the town of Zuepthen, 32 yrs old.	Silver fork, 21 ctm. long, and some pieces of crockery of triangular shape, 2 ctm. in their greatest diameter.	3 days	Very weak patient. Great difficulty of swallowing. Diagnosis is proven by sounds and by examination of region of the stomach.	Patient is anæsthetized with ether. Incision only about 3 inches in length in linea alba. Stomach is drawn forth with two forceps, an opening, one inch in length into the anterior wall of the stomach, causing considerable hemorrhage. Finding of the fork and crockery consumes time and is found very troublesome. The stomach is closed by 5 stitches, the ends of which were conducted and allowed to hang out of the lower angle of the abdominal incision. The latter was closed by a simple suture.	Vomiting of greenish fluid, pain and tympanites during first and second days. Feeble and high pulse on the second day, death on the third.	*Post-Mortem* shows plastic material which has caused a conglomeration and adhesion between the stomach, liver and abdominal parietes. The incision in the stomach entirely closed. The stomach much distended. The upper third of the œsophagus is much lacerated and perforated opposite the larynx A pus-sinus extends along the lobe of the thyroid body.
3	BELL, of Wapello, Iowa, 1855.	*The American Journal of the Medical Sciences*, 1855, July No., p. 272.	Male, aged 27.	A bar of lead 9 inches long, 1-5 inch in diameter.	9 days	No serious inconvenience at first. Vomiting on the eighth day and great prostration. The foreign body can not be detected with certainty.	An incision beginning near the umbilicus extends directly outward towards the point of the second false rib, about four inches long. The bar is extracted with a forceps through an incision which is made upon the foreign body. The contraction of the stomach suffices to close the opening. Prolapse of some intestines during the operation. Abdomen closed by the interrupted suture.	Some symptoms of gastritis. The after treatment consisted of morphine injections, two venesections and enemata. External wound healed in 5 days. Patient entirely recovered in 2 weeks.	Complete recovery.
4	LEON LABBÉ, in Paris, 1876.	*Gazette Hebdom* Second Series. XIII(XXIII) 18, 1876, p. 278.	Lausseur, male clerk, aged 18.	Fork, five-pronged; German silver.	2 years and 10 days.	No serious inconvenience for 6 months. Later on bad attacks of syncope and severe symptoms of gastralgia.	Futile attempts were made by external applications to cause adhesions between stomach and abdominal parietes Laparotomy parallel to the ribs less than two inches in length. Stomach pulled out by means of forceps. Attached to the abdominal incision by sutures before opening it. The fork was then extracted with a polypus forceps	A strong collodium cuirass was applied over the abdomen. Allowed solid food after fifth day. Wound healed nicely, excepting over the gastric fistula.	Patient dismissed on the 15th day, but a small fistula leading into the stomach was still open.

5	KOCHER, in Bern, 1883.	*Correspondenz-blatt fur Schweizer Ærzte.* 1883. Nos. 23 and 24.	Male, 37 years old.	Piece of a broken instrument called coin catcher.	1 day.	No serious inconvenience.	Oblique incision 2 ctm. from edge of ribs. Stomach secured by two loops of thread. Incision into stomach over an inch long. Coin extractor easily removed; incision closed by 10 Lembert sutures.	Careful diet, no fever, wound heals kindly.	Complete recovery.
6	GUSSENBAUER of Prague, 1883.	*Vienna Medical Weekly*, 1883, No. 51 and 52.	Professional sword swallower, 19 yrs old.	Broken sword blade 10¾ in. in length. Broken end sharp.	2 days.	Great pain, emettics, and hanging by the feet are tried. Fever, vomiting, singultus.	Operation is very difficult; the sword blade is extracted with great difficulty after the stomach was opened.	Death in two days, of septic peritonitis.	Autopsy revealed the fact that the point of the sword had perforated the stomach, and the broken end had perforated the œsophagus.
7	SCHOFNBORN, in Kœnigsberg 1883.	*V. Langenbeck's Archiv. of Surgery*, Vol. 29, page 609.	Girl, 15 years old.	Hair tumor, kidney-shaped and hard.	About 4 years.	Vomiting, a freely movable tumor in the left hypochondriac region.	Laparotomy in the linea alba. Tumor found loose in the stomach. The incision into the stomach was made parallel to the major curvature Sixty-five Madelung's intestinal sutures were employed to close the stomach.	First intention of all sutures. Dismissed from hospital after 3 weeks.	Complete recovery.
8	THORNTON, London, 1884.	*Lancet*, 1884. No. 3	Girl, 17 yrs of age.	Hair tumor, weight 2½ lbs.	Several years.	Diagnosis: Abdominal tumor. Great prostration.	Incision into the stomach was closed by several rows of sutures The tumor filled up the entire cavity of the stomach.	A sponge was left in the abdomen, but removed on the second day. Patient had parotitis of both glands.	Final complete recovery.
9	BILLROTH, Vienna, 1885.	V. Hacker, Operations on the stomach in Prof Billroth's Clinic, from 1880 to 1885. Vienna: Published by Teplitz & Deutsche.	Girl, 19 yrs of age.	Artificial denture, 6 teeth.	2 days	But little inconvenience	Incision along the ribs 4¼ inches in length, beginning near ensiform process. The foreign body is very difficult to find, but is finally extracted through a small opening, the stomach being held by two loops of thread. Some ordinary interrupted sutures and a few Lembert sutures in three rows.	The healing process goes on without any feverish reaction. Patient leaves the hospital after five weeks.	Complete recovery.
10	CREDE, Steff Surgeon in Dresden, 1885.	*V. Langenbeck's Archiv. of Surgery*, Vol. 33, page 574, 1886.	F. Mücke, a barber, 24 yrs of age.	Hard rubber denture, eight teeth & clamps	15 days.	Vomiting, insomnia, great nervousness.	Oblique incision 5 inches long parallel to the ribs, beginning near the ensiform process Stomach was drawn out. Foreign body was found near the pylorus Incision into stomach 2 inches long. Three tiers of sutures were used to close the stomach.	No vomiting, no feverish reaction, patient dismissed on the 21st day.	Complete recovery.
11	A.C. BERNAYS, St. Louis, Mo., 1886.	*Medical Brief*, St. Louis, Mo., Jan. 1887.	Jos. Hoffmann, tailor, aged 38.	Silver-plated table knife, 9¼ inches long, (24½ ctms.)	1 hour.	Frequent painful contractions of stomach, but no vomiting.	Incision in linea alba 5 inches long between umbilicus and ensiform process. Stomach drawn out and held by 2 Hegar's kugelzangen. Incision on knife handle about ¼ inch in length; 5 direct interrupted sutures, buried by a row of eight Lembert sutures. Stomach replaced. Abdominal incision closed by 18 sutures.	No vomiting, no fever. First intention; patient left his bed ten days after operation.	Complete recovery.

Vienna, in his operations on the stomach.

I now replaced the stomach in the abdomen. There was little or no bleeding, and the toilet of the abdominal cavity was very simple. The operation was finished by sewing up the external wound in the usual way. I applied about eighteen silk sutures and dressed the wound in the same manner that I am accustomed to, after ovariotomy. The dressings were held in place by an elastic web bandage. The patient was carried to his bed. He rallied quickly after having been under the influence of chloroform about an hour. The knife had been in his stomach less than an hour, before the operation.

The after-treatment was conducted by Dr. Kinner in a most judicious but strict manner, and was followed by a most brilliant result. The patient never vomited at all after the operation; his temperature reached 100° F. only on one occasion, for a short time, and his pulse never exceeded 86. He was given a spoonful of water about every two or three hours during the first four days, but large nutrient enemata of peptonized milk, beef tea, etc., were given three times a day. The entire wound healed by first intention. I removed the stitches on the fifth day. The patient *got up on the tenth day* and was discharged from medical attendance on the fourteenth day. The photograph, from which fig. 1 is copied, was taken on December 6th, nineteen days after the operation. The patient is as well in every respect as he was previous to the accident.

The table which precedes shows that *only ten cases of gastrotomy are recorded* in the history of surgery, which can be compared to the one just described. We must exclude, from comparison with our own, all cases where adhesions had been formed between the stomach and the abdominal walls. In the latter cases, the operation of gastrotomy loses its dangerous features and becomes an operation of little more importance than the opening of an abscess. Including these latter cases, there are twenty-six cases of gastrotomy on record with four deaths. Seven of these, however, are so imperfectly described by the authors that they must be discarded from all tables which lay claim to our consideration for scientific purposes.

The above table requires but little explanation. The facts speak for themselves. The operation shows a surprisingly small number of deaths, the mortality being only eighteen per cent. All the cases have peculiarities, only two are nearly alike, they are the cases of Billroth and Credé. In both of these a set of false teeth was swallowed by the patients while asleep. The lives of both patients were saved by the operation of gastrotomy. This should be a warning for all those who wear artificial dentures, to remove them before retiring.

The distinguishing feature of my own case is: Firstly, the prompt manner in which the operation was performed, the knife having remained in the stomach only about one hour. Secondly, the knife which I removed seems to have been the longest object, which has been successfully removed from the stomach by gastrotomy. Thirdly, there are some minor peculiarities in regard to the method of suture and the employment of antiseptics, which differ from former cases.

903 Olive St., St. Louis, Mo.

[Written for the MEDICAL BRIEF.]

Post-Partum Hemorrhage and Its Treatment.

BY M. CLAYTON THRUSH, PH. M., M. D.,

Demonstrator of Pharmacy, Materia Medica and Prescription Dispensing and Instructor in Therapeutics, Medico-Chirurgical College. Philadelphia, Pa.

Hemorrhage during, or shortly after the third stage of labor, is one of the most trying and dangerous accidents connected with parturition. Its sudden and unexpected occurrence just after the labor appears to be happily terminated, and its alarming effects on the patient, who is often placed in the utmost danger in a few moments, tax the presence of mind and the resources of the practitioner to the utmost, and render it an imperative duty on every one who practices midwifery to make himself thoroughly acquainted with its causes and the preventive and curative treatment.

There is no emergency in obstetrics which leaves less time for reflection and consultation, and the life of the patient will often depend on the prompt and immediate action of the medical attendant. Every one has heard of cases, if he has not had them in his own experience, where, an otherwise normal labor, suddenly terminated with the death of the mother, and this often occurs at the very time it is least expected, and it occurs among the most skillful obstetricians, as well as the practitioner of the average ability. It is one of the most frequent complications of pregnancy, and it is especially common among the upper ranks of society. This is probably due to the effects of civilization and the mode of life of patients of that class whose whole surroundings tend to produce a lax habit of body, which favors uterine inertia, the principal cause of *post-partum* hemorrhage.

The report of the British Registrar General for five years showed three thousand five hundred and twenty-four deaths due to this cause.

Fortunately it is, to a great extent, a preventable accident. It is a curious fact that *post-partum* hemorrhage is much more common in the practice of some medical men than others.

Etiology.—(*a*) *Uterine Inertia:* One of the most common causes is irregular or incomplete contraction of the uterus, following the expulsion of the placenta, and, as a result, there is incomplete closure of the venous sinuses, which are destitute of valves, and if contraction be absent, partial or irregular, it is easy to understand why blood should pour forth in the appalling amount which is sometimes observed. Uterine inertia is often caused by exhaustion following protracted labor.

(*b*) *Extensive laceration of the cervix.*—This condition may be present from this or previous labors, and blood may escape, even if the uterus is satisfactorily contracted.

(*c*) *Over-distention of uterus.*—This is observed when there has been an excessive amount of liquor amnii, or in multiple pregnancies.

(*d*) *Rapid delivery.*—Rapid emptying of the uterus during which there has not been sufficient time for complete separation of the placenta, often tends to the same result. This explains the frequency of hemorrhage following forceps delivery and "precipitate labors."

(*e*) *General condition of the patient.*—The general condition may strongly predispose to it. Then it is more often observed in women who have borne families, especially if they are in a weak and debilitated state, and it is comparatively rare in primipara.

(*f*) *Climate.*—Climate is also a factor, and women debilitated by the relaxing effects of warm climates, are peculiarly prone to it, as is proven by the experience of practitioners in the tropics.

(*g*) *Partial or irregular contraction.*—Another important cause is partial and irregular contraction of the uterus, as "hour-glass" contraction, due to spasmodic contraction of the internal os uteri, by means of which the placenta becomes encysted in the upper portion of the uterus, which is relaxed.

(*h*) *Placental Adhesions.*—These are sometimes a causative factor, and the direct cause of these adhesions is often obscure, but it most probably results from a morbid state of the decidua, which is produced by antecedent disease of the uterine mucous membrane.

(*i*) *"Flooders."* — There are some women who deserve this appellation, as they have the most extraordinary tendency to hemorrhage after labor; do what you may to prevent it.

(*j*) *Malpositions of placenta.*—Such as is observed in partial placenta previa, or where placenta is abnormally low, and near os uteri.

Time of Hemorrhage.—The loss of blood may commence immediately after the birth of the child, before the expulsion of the placenta, or not until some time afterward, when the contracted uterus has relaxed. It may commence gradually or suddenly. There are few sights more appalling to witness than one of the worst cases of *post-partum* hemorrhage.

Treatment.—This can be conveniently divided into preventive and curative. The preventive treatment of *post-partum* hemorrhage should be carefully practiced in every case of labor. If the practitioner makes it a rule to have his attendant

place the hand over the contracting uterus, immediately after the expulsion of the child, until he separates the cord, and then he himself grasps the uterus and holds it, he will find few cases in which the placenta will not be expelled within ten minutes after the birth of the child, and but few cases of *post-partum* hemorrhage will be experienced.

Where there is a known predisposition to hemorrhage, small doses of ergot with strychnine, or other agents, as calcium chloride, or the active principle of the suprarenal glands are often of value, regulating dosage as indicated.

Curative treatment.—As there are only two means which nature adopts in the prevention of *post-partum* hemorrhage, so the remedial measures may also be divided into two classes: (1) those which act by the production of uterine contraction; (2) those which act by producing thrombosis in the vessels. The first are generally used, and the second only resorted to in the worst cases.

Administer ergot or the active principle of the suprarenal gland, hypodermically, in conjunction with diffusible stimulants, such as brandy and ether, according to the condition of the pulse. Bimanual pressure of the uterus should be resorted to at once, and all clots pressed out, and the uterus kneaded to stimulate contraction, keeping it between the two hands all the time. If there is considerable loss of blood, the injection of normal saline solution, either alone or combined with the active principle of the suprarenal gland, is of great value, either by hypodermoclysis, enteroclysis, or intravenous injection, as indicated. The introduction of various agents into the uterus is often of value. Use ice or ice-cold water, or hot water (100° to 120° F.), either alone or with some agent, as the compound solution of cresol, the active principle of the suprarenal gland, or some iron salt in solution. Packing the uterus with gauze or cotton is often of the greatest value.

Electricity, in the faradic current, is often useful. Finally the injection, or application of powerful styptics, such as ferric chlorid or sub-sulphate, matice, iodine and vinegar or acetic acid is often necessary in order to arrest the bleeding.

In conclusion, the following case will illustrate the treatment employed in a severe case of *post-partum* hemorrhage, with recovery:

Mrs. R., age twenty-eight, housewife: Gave birth to healthy child two years ago. This was her first child, and labor was normal, except forceps were required owing to the large child. When sent for, found her in active labor, with cervix dilated, and delivered a normal child, followed in five minutes by placenta, and everything entirely satisfactory. Patient was lying on her back, and, without the slightest warning, about five minutes later there was a terrific gush of blood, which fairly streamed from the vagina, and in a few seconds, before I could introduce my hand to make compression, she was almost in a state of collapse. Notwithstanding manipulation, with resultant contraction of uterus, the hemorrhage abated but slightly, and I at once packed the uterus solid with cotton and gauze at the vaginal outlet, with good and tight binder later over abdomen, after hemorrhage was controlled. By this time patient was blanched, and almost exsanguinated. Administered diffusible stimulants; brandy and strychnine, hypodermically, with ergot, then strong coffee, by mouth and external heat, and patient gradually reacted, when saline solution was given by rectum, and the following combination internally, with excellent results. Cotton tampon was removed next morning.

℞ Calcii Chloridi..... 5 grains.
Sol. (1:1000) of active principle of Suprarenal Glands.....20 minims.
Fluid Ext. Ergot..... ½ drachm.
Elix. Aromat.....q. s. ad..... 1 drachm.

M. Sig.: This dose was administered every two hours for three doses, then every four hours for two days.

3705 Spring Garden Street.

[Written for the MEDICAL BRIEF.]

The Needs and Uses of Eye Glasses.

BY W. WHITEHEAD GILFILLAN, M. D.,
Oculist to the City Hospital, French Hospital, Sailors' Snug Harbor, and to the House of Refuge; Consulting Oculist to St. Vincent's Hospital, Staten Island, New York City.

It is not my idea to go very deeply into the subject of refraction or ordering of glasses. This is a subject of which, perhaps, the general medical man knows less of than any other department of medi-

cine; and justly so, too, when one considers the eye to be a special subject by itself. There is probably no other branch of medicine which has been, and is recognized today to be more of a special subject by itself, than diseases of the eye. The work of the specialist in this line is made up largely of testing for refractive errors of patients. In fact, three-quarters of all our work is of this nature. The other quarter is made up of treating external eye diseases, ophthalmoscopic work and operations.

The men who graduate from our large medical schools today have been instructed in a general way in this branch of medicine, as they have been in other special lines. How different this is from twenty years ago, when a man knew nothing about special subjects at graduating. He was busy enough in his two years' course without them.

Refraction, to many, is a very dry subject, and it is not my purpose to bore you with details. It is an exact science so different from many other departments of medicine. The theory of it is quite different from the practical application of it, and there are a number of practical applications of one theory. A man may know the science of refraction from the book very well, but the practical application of it is quite a different thing. To my mind it takes between three to six months, working daily with cases, for a man to become proficient in it.

Probably many of you have test cards in your offices to test a patient's sight roughly. These test types have been found on the examination of many thousands of eyes, to form a standard of sight. The top, or largest letter, which is about the width of the finger, should be seen at a distance of two hundred feet by the normal eye. The usual distance to place the card from the patient is twenty feet; for the sake of convenience, of course, it may be placed closer, if there is not more space, say ten feet. In reporting cases it is usual, however, to have tested at twenty feet, and for that reason we use that distance for testing, when possible. Each line of letters on the card is numbered, as, for instance, the top, two hundred, means, as I have said, should be seen at two hundred feet from the eye. The second line of two letters, is one hundred; meaning it should be seen at one hundred feet away. The third, seventy; the fourth, fifty; then forty, thirty and twenty.

In testing a person for sight, we test the eyes separately by holding a card over one eye. If we did not do this we would not know if there was any difference in the vision of each eye. For instance, a person with one eye which could only read the top line, and the other eye read all the lines of letters, the result in testing both eyes together would be that the patient would read every letter on the card, and one would not know that one eye was so defective.

In this case one eye, the right, we will say, sees only the top letter, the other all; we would make a record that the vision of the right eye was 20/200, or 20/200 of what it ought to see, while the vision of the left is 20/20, or normal sight. If an eye can see the letters on the second line and letters below, we record the vision as 20/100. In the same manner, if an eye can read the sixth line, down which is marked thirty, it would be recorded as 20/30.

If we were testing at a distance of only ten feet, we would write it 10/200, if the eye could only see the top letter. If an eye is so defective in vision that it can not see the top letter at twenty feet, we bring the card closer until it can be seen, say, at five feet. We would then write the vision as 5/200. A better plan is to use the fingers, since they are the same size as the top letters. That is, hold them out in front of one and walk towards the patient until they can tell the number that are held up. The advantage is the number of fingers can be quickly changed and the patient can not fool you as they can with a card, particularly when they know the top letter.

The reasons why a person presents themselves to an oculist for examination for refractive error is usually one of two reasons. Either they do not see well or they have headache, or pain in the eyeball. The first thing we do when a person is to be examined for glasses is to test the vision. Many people complain of headaches, and particularly pain right over the eyes when they engage in any

close work, such as reading, writing, etc. Many of these cases, on examination, will show that the vision is very good; in fact, what we call normal, or 20/20. The trouble in these cases is the astigmatism, which is an uneven curvature of the front of the cornea. That is, one meridian, say the horizontal, is more curved than the other, the perpendicular.

For these cases a cylindrical glass is what is required to equalize things. A glass of this nature refracts only in one meridian. By wearing proper glasses these kind of cases are relieved of their headaches. It is not that the sight in these cases is improved very much, or even at all in some, but it relieves the eye strain to which the eye has been subjected. Astigmatism is supposed to be caused by the unequal pressure of the eyelids on the cornea. This is corneal astigmatism. We may also have astigmatism of the lens of the eye, which is not so common. It often is very surprising what splendid results are gotten by wearing a weak cylindrical glass in these astigmatic cases. A person may have suffered from the most severe frontal headaches, or pain in the back of the head, for a long time, and the vision is normal for distance, but, on examination with the ophthalmometer, we find astigmatism. After a few days' wearing of the proper glasses the headaches subside. It is most important for these people to wear the glasses straight. That is, so that the lenses are not tilted up or down. If they are on wrong, it is as bad as if no glasses were worn. They are sure to have their headaches then, and blame the glasses or oculist.

Other cases may be near-sighted (myopic), or far-sighted (hypermetropic). In near-sighted people the distant vision is apt to be very bad. With a concave spherical glass we can usually improve the sight very much. A patient may have vision in each eye of only 20/200, which, by proper correction, can be brought up to 20/20.

It is the custom in the examination of patients, after the vision is found, to use the ophthalmoscope. By it one is enabled to tell at once if it is near-sightedness or far-sightedness we have to deal with. More important, though, is to see if the eye be healthy. That is, that there is no diseased condition of the inner coats of the eye, the chorioid and retina and the optic nerve.

This nerve is the only one in the body that may be inspected. Eliminating any diseased conditions we can proceed to the test-glasses. About the test-glasses I need not burden you.

Of what I have told you about using the ophthalmoscope is where the difference comes in between the oculist and optician. A person may come to an oculist thinking their sight is bad, and due to some refractive error which can be corrected by proper glasses. The oculist discovers something much more important—the cause, such as choroiditis, retinitis, cataract, atrophy of the optic nerve, or glaucoma. It may be that the person has come in time so that something can be done to relieve matters. The oculist does not have to order glasses for every person that comes into his office. With the optician it is different. A person calls on him and he tests the distant vision, and finds it 20/100, we will say. He uses all kinds of glasses, and at last orders something—possibly a strong magnifying glass—anything to make a sale. Perhaps the person has glaucoma, and in the course of a few days, goes blind. In a short time there will be no hope of restoring sight unless something is done in the way of an operation. Of course, these things do not happen very often, but we, as oculists, see all the bad cases that have been neglected.

There is a bill in the Legislature now to license opticians, so that they may have a standing almost equal to oculists. When a person stops and thinks that an oculist is a graduate of medicine, and has studied four years, and then takes up the eye as a special subject afterwards, it seems strange he should be classed with any one who sells eye-glasses. The relation between the oculist and optician should be the same as between the physician and druggist.

People who get to be forty-five years old, and have never had any trouble with their eyes, find that in the evening, when reading, their eyes get tired, and they become sleepy. The book has to be held a little farther off to see the letters. This condition is what is called presbyopia, or

old sight. The vision for distance may be normal, or 20/20. What is needed is a convex glass which will magnify. The condition of presbyopia is physiological, and not pathological. The muscles which move the lens so as to make the focus for reading distance lose their power. Their place is supplied by the glass. It is necessary always to test a person first for distance to see if they are far-sighted. If they are, the far-sighted glass is added to what may be needed for reading. That is, a person who is not either near-sighted or far-sighted at forty-five will require a +1D glass to read with. If they were far-sighted, say +2D, they would need a +3 to read with. If a person were near-sighted, say —2D, the condition is different. A —1D glass, held against a +1D glass, neutralizes each other, and makes a plain piece of window glass. The person, then, at forty-five, who uses —2D for distance, needs only a —1D to do near work with, and at fifty years needs no glasses at all for close work. Every five years from forty-five on a +1D is required for reading distance. At fifty-five this same person would still be using the —2D for distance and +1D for near.

We come across people eighty or ninety years old who say they never use glasses, and see as well as ever for distance and near. This is easily explained. One eye, we will say the right, is neither far-sighted or near-sighted, and the vision good for distance. The other, or left, is near-sighted, and is used for near work. Of course, these two eyes never can focus together. Take, for example, a man aged thirty-five who has vision of 20/70 in the right eye and 20/100 in the left. The right eye is far-sighted, we will say (+2D), and with that glass brings up the vision to 20/20. The left is myopic —3D. The focus of the eyes is so different that a — glass and a + glass can not be worn with comfort at the same time. It gives one a headache. What we do is to order a + glass for the right and a piece of window glass for the left. At the age of fifty-five he may read without any glasses at all.

Almost any one can wear glasses if they wish to. Very few people have perfect sight from a scientific standpoint. A person may have vision of 20/70 in one eye and 20/50 in the other, and for the kind of employment they are engaged in, it is quite enough, perhaps. There would be little use in putting on glasses and making the vision 20/20, particularly if they have no headaches.

A friend of mine, an oculist, is making an examination of all the eyes of the school children of Tuxedo. Of the one hundred and fifty he has so far examined, he finds one-third with defective vision, and quite a number who read 20/20, but who have eye-strain. It does not seem to me that all of these children require glasses, although many oculists would say they did. A child might have vision of 20/40 in one eye and 20/50 in the other, and still be bright, and learn quickly, and have no head symptoms. Such a case does not require glasses. Most of the cases who had 20/20 vision, and had the head symptoms, would require glasses. Most of these cases are astigmatism. When a person has astigmatic troubles it is not necessary to wear glasses all the time. To use them for close work may be enough. If, however, the headaches continue when a person is walking or sitting around the house it will be necessary to make constant use of them. In other words, any time a person has headaches, wear the glasses. The amount of astigmatism often changes, and sometimes very quickly—that is, in a few months. It may get less or increase. Of course, this change is due to change of contour of the cornea. For this reason a person might have headaches six months after getting glasses and wearing them all the time properly. The change in the cornea would explain the whole trouble.

Of course, a person may be far-sighted or near-sighted and have astigmatism also. In these conditions we correct both with a combination glass of cylindrical and spherical. It has to be ground especially for the case. This kind of glass is much more expensive than a plain cylinder or spherical, which an optician has always in stock.

There is a proposition now before the Board of Education of the city to have all school children's eyes examined for refractive errors, and glasses to be supplied when the parents are too poor to pay for them. It is estimated that there

are sixty thousand children who require glasses. It is a good thing to have glasses when needed, but most of us, I think, are opposed to having the city give away glasses. The best way is to have the children supplied through some hospital or dispensary by private charity, the way it is done at present. Most dispensaries and hospitals have a fund to supply glasses for those too poor to pay.

I have not spoken about the use of cycloplegics or drugs used to paralyze the accommodation in testing for refractive errors. At the present time I hardly ever use them, as I believe, after a long trial of atropine and other drugs, that we get better results without their use. Many men do use them, and swear by their use. The mydriatics usually employed are atropine and homatropine. Cocaine is not used, because it does not completely paralyze accommodation. In London the rule is to use atropine on every refractive patient from fifteen to twenty-five years old. From twenty-five to forty, homatropine. The great objection to the use of these drugs is that it keeps a person away from employment, as they can not use their eyes for close work. It takes a week to ten days for the paralysis of accommodation by atropine to wear away. In homatropine two to three days. The objection to homatropine is that it does not always completely paralyze accommodation.

For instance, a person has vision of 20/20 in each eye, but has headaches. After a four-grain to the ounce solution of sulphate of atropine has been instilled in each eye, drop t. i. d., for one day, the vision is 20/50. By the ophthalmoscope we may find three-fourths of a D of hypermetropia, which, of course, will not be accepted by the patient after the effects of the atropine have worn off. The ophthalmometer is one of the oculist's most valuable instruments. It tells the amount of the corneal astigmatism and the axis of it, which is most important. In a case like this it saves us much trouble, as it lets us know if there is any astigmatic trouble or not. Let us suppose that a patient's vision has only 20/200 after using atropine, and we tested and found no astigmatic trouble, but with a +2½D glass the vision was brought up to 20/40. We would not think of ordering the +2½D glass, but wait until the effects of the mydriatic has worn off. We test again, and find only +1D glass accepted. We order this. Of course, by using the atropine we have found out the total amount of refraction, but the patient will not accept all, as the action of the ciliary muscle prevents this. Only the manifest hypermetropia is corrected, not the latent also. What is the use, then, of using atropine if one gets good results without it? As I showed, we order what the patient accepts after atropine wears off. Why not do it at first? I belong to the school that does.

Of course, people who have had cataracts removed require glasses to see. The lens which is removed has a magnifying power of +9D, usually. If the patient has been wearing +3D glasses before the cataract developed, we add this to the +9D, which would be +12D glass which was needed.

I have recently operated on a patient who, before the cataract developed, wore a —9 D glass. Since the operation no glasses are needed. As +9 and —9D, held together, neutralize matters.

I have only tried in a very slight way to touch on a few points on refraction. If I have made some matters about wearing glasses clear I am glad.

44 West Fiftieth Street.

[Written for the MEDICAL BRIEF.]

A New Ligature Carrier.

BY ELLERY M. HETHERINGTON, M. D.,
Professor of Diseases of Women and Obstetrics in the University of Kansas.
Kansas City, Mo.

This needle is designed to take the place of the Cleveland needle, and differs from the latter in the following respects:

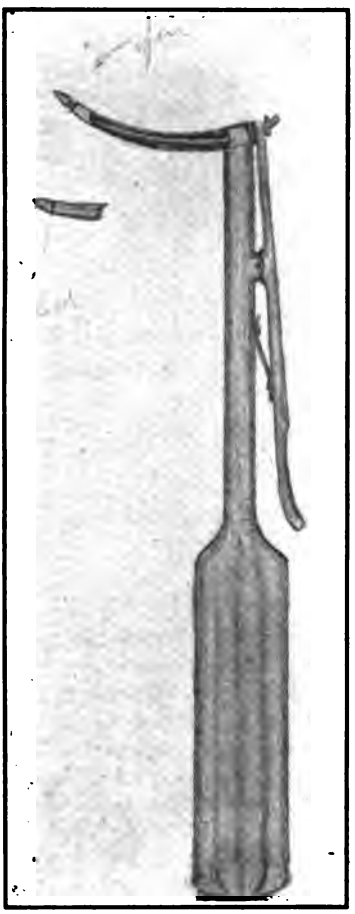
It is not necessary to spread this needle in order to thread it, thus avoiding the possible laceration of tissues through which it passes.

It can be threaded either before puncture or after, and the thread withdrawn with the needle, the same as in the Cleveland needle.

A little spring underneath keeps the needle's eye always open, and which per-

mits the entrance of the ligature without the aid of vision. Then very slight pressure made upon the thread handle presses the thread between two square shoulders, and grasps it very firmly; by releasing the handle the ligature falls of its own accord over the needle, or the ligature is released from the needle automatically.

This needle is nothing more nor less in structure than the trocar and cannula,



the trocar having a head with a small bar passing up through the cannula, which forms a notch in the end of the needle.

The instrument can be made perfectly aseptic by removing the two little thumbscrews.

The inventor has used this needle several times, and has found it absolutely satisfactory.

Its greatest utility is for the passing of sutures through deep structures in the abdominal cavity, where it is impossible to raise the tissues high enough to see the point of the needle to throw the thread or release it. By the guidance of the finger with the needle closed, it can be gently pressed through any tissue, and the handle released, when the needle will open and the ligature be carried down over the end of the finger until you reach the shaft of the needle, when, by sliding the ligature along toward the point of the needle going to the notch, it will follow it, and pressure can then be made upon the handle, and the ligature is caught firmly.

On the other hand, if the needle is removed with the ligature before making a puncture, the ligature can be caught with a pair of forceps, or with the finger in the same manner as it was threaded in the other instance.

If one desires to use the "cobbler's stitch" in the broad ligament, or in any other tissue, one end can be carried through, and the other end threaded and drawn back, just as the shoemaker uses the double waxed end. Or if you wish to increase the utility of the "cobbler's stitch" by making continuous interrupted ligature, it can be done in the manner already referred to by the addition of tying your end before threading the needle to withdraw. The same end can be carried back through the same opening, and the second end tied, and so on from one to another, so that a continuous interrupted ligature can be made with any number of ligatures desired.

Altman Building.

[Written for the MEDICAL BRIEF.]

A Few Notes on Diagnosis of Injuries of the Extremities.

BY B. D. MATCHAN, M. D.,
Senior Professor of Surgery in the Homeopathic Medical College of the University of Minnesota.
Minneapolis, Minn.

One of the most important surgical subjects to the general practitioner is the accurate diagnosis of injuries to the extremities, as, for instance, dislocations and fractures. I do not believe there is another surgical subject which comes

within the scope of the average practitioner where there is more responsibility.

In order to be accurate in our diagnosis, comparatively accurate, it is necessary that we should become thoroughly familiar with the anatomical landmarks. Landmarks always bear the same positive anatomical relations to each other.

For example: When normal, the olecranon process always bears the same positive relation to the condyles of the humerus. The acromion process bears the same relation to the head of the humerus.

We appreciate when the swelling of the joint is great and there is marked tenderness that it becomes difficult, and sometimes almost impossible, to locate definitely the landmarks. Under those circumstances an anesthetic, of course, is necessary. Landmarks once located, if they bear the same relation with the corresponding landmarks on the opposite extremity, viz.: normal, there can be no displacement of the articulating surfaces entering into the formation of that particular joint, hence dislocation is eliminated.

In fractures, I believe the three most important symptoms are: First, deformity; second, loss of function, and third, a distinctive diagnostic feature which I have found of great value, enabling me many times to make a diagnosis which otherwise might be difficult, is the much impaired or lost sense of transmission of the bone. For example, grasping the suspected injured bone by either extremity; if there is no solution of continuity any manipulation made at one extremity is transmitted directly to the other extremity. If there is solution of continuity it is very much impaired, or entirely lost.

Deformities in surgery mean something more than the name implies. It may be swelling, infiltration, or any deviation from the normal. In cases of fracture deformity means either shortening or deviation of the bone from its normal axis.

Solution of continuity means loss of function.

There is one other symptom always considered very important, yet I think overestimated, because many times it has been impossible to elicit it, viz.: crepitus.

Even in fractures the landmarks become a very important factor in our diagnosis. For instance, in a broken femur, if the distance from one superior spine of the ilium to the inner malleolus is the same on the injured leg as on the opposite one, there is at least no shortening. If there is no deviation in the long axis of the suspected bone, there can be no displacement of the fragments. Yet it is possible under these circumstances to have a tranverse fracture, but if any manipulation that is made at the knee is transmitted directly to the greater trochanter there is no fracture of the shaft.

Hence, a correct knowledge of landmarks, and the exercise of great care in examination, will save us many hours of anxiety, and possibly suits for malpractice.

312 Masonic Temple.

[Written for the MEDICAL BRIEF.]

Diseases of the Breast.

BY ALFRED DE ROULET, B. S., M. D.,

Chicago, Ill.

Formerly Professor of Surgery and Diseases of Women in the Medical Department of Trinity University.

IV. FIBRO-EPITHELIAL TUMORS.

Inasmuch as the mammary gland consists essentially of a conglomeration of epithelial-lined ducts, supported in a fine connective tissue reticulum, all new growths appearing in the breasts partake largely of the characteristics of both tissues. In one tumor the epithelial elements predominate, while in another the connective tissue is more in evidence. A tumor originating in the periductal connective tissue inevitably involves the epithelium of the ducts, while an epithelial tumor, unless it be carcinomatous, can not develop in the breast without including in its structure a considerable quantity of connective tissue. On account of this intimate relationship between the epithelial and the connective tissues, it would seem almost impossible for a pure fibroma, or a pure adenoma to develop in the breast. The efforts of the early surgeons and pathologists to classify breast-

tumors in accordance with the nomenclature applicable to new growths in other organs, resulted in the most hopeless confusion. The first effective effort to bring order out of chaos was made by Ribbert, when, in his classification, he suggested a special group of "fibro-epithelial tumors." Warren has still further simplified matters by defining and restricting the use of the term, and by harmonizing the clinical aspects of the fibro-epithelial tumors with their pathological nomenclature.

included therein by the extending periductal tissues. The fibrous tumors are classified according to the character of the fibrous growth, and the degree of cellular development, into three groups: (*a*) periductal fibroma, (*b*) periductal myxoma, and (*c*) periductal sarcoma. Personally, I am inclined to consider the periductal myxoma an unnecessary refinement of differentiation. These tumors not only occur very infrequently, but such as come under observation are often distinguished with the greatest difficulty from

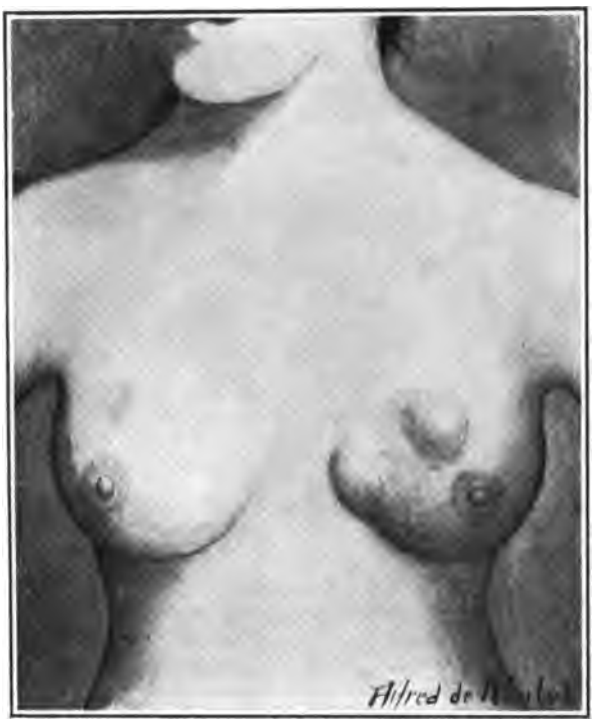


FIG. 1. Periductal Fibromata of Breast.

In Warren's classification these tumors are divided into two distinct groups. (1) the fibrous, and (2) the epithelial, according as the fibrous or the epithelial elements predominate.

The tumors of the fibrous type arise from the periductal connective tissue of the breast, and consist essentially of this tissue, although they contain, more or less incidentally, certain portions of the epithelial structures of the gland, such as distorted ducts and epithelial-lined clefts. These structures do not form an integral constituent of the tumor, but are simply the fibromata on the one hand, or periductal sarcomata on the other.

Periductal Fibroma.—This type of tumor is of comparatively frequent occurrence, comprising rather less than ten per cent of all tumors of the breast, and approximately fifty per cent of all tumors appearing in the breast before the thirtieth year. They are found most commonly in the breasts of women of from twenty to thirty years of age, and rather more frequently in those who are sterile than in those who are prolific. The size of the tumor varies from

that of a filbert to that of an orange, the average being about the size of an English walnut. The tumors are of slow growth, and painless, and may be single or multiple; as a rule, they are found at the periphery, rather than in the central portion of the breast, and are superficial, rather than deep-seated. Not infrequently both breasts are involved. The individual tumor is smooth, rounded, hard, elastic, and freely movable in the breast substance. It does not infiltrate the surrounding tissues; it does not become adherent to the skin; it causes no enlargement of the axillary or supra-clavicular lymphatics, and gives rise to no constitutional symptoms. On section it appears as firmly encapsulated tumor, of a glistening whitish appearance, the cut surface being traversed by numerous irregular fissures and clefts, while cyst formation to a variable extent is occasionally observed.

Periductal Myxoma.—The periductal myxoma are of very infrequent occurrence, and is said to appear somewhat later in life than the periductal fibroma; that is, from the twentieth to the forty-fifth years. As a rule it is somewhat larger than the fibromata, and is of considerably slower growth, although in isolated cases the growth is comparatively rapid. The tumors may be single or multiple, and one or both breasts may be involved. The individual tumor is smooth, rounded, and imparts to the fingers a sensation somewhat resembling that of a slightly wilted potato. The smaller tumors are freely movable in the brea but with the larger tumors the degree mobility is greatly diminished, and adl sions to or ulcerations of the skin a likely to develop, as the result of pressu The axillary glands may become enlarg although such enlargement is by means characteristic of this conditi Pathologically it does not differ appre ably from the periductal fibroma. On s tion it presents a homogenous, ser transparent, whitish stroma containi irregular clefts and cyst cavities.

Periductal Sarcoma.—This tumor is f tunately, quite rare; occurring in appr imately one-half of one per cent of breast tumors. They are found most f quently in the breasts of women of fr

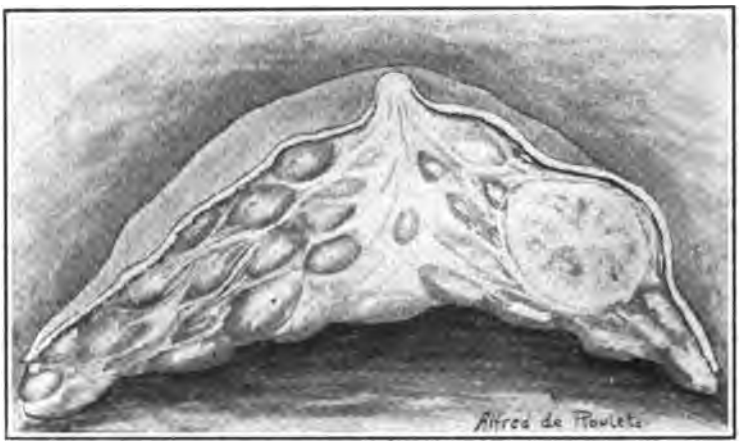


Fig. 2. Section of Breast Showing Periductal Fibroma.

forty to sixty years of age. They devel slowly, and without any appreciable pa and may attain a size ranging from th of an orange to that of a child's he The skin overlying the tumor is usua reddened, but is not necessarily adhere or ulcerated, although there is a stro tendency toward ulceration. The sup ficial veins of the breast are often grea distended. The axillary lymphatics a not usually affected.

The tumor itself is large, hard, lob lated, and surrounded by a very we defined capsule. A large portion, if n the entire breast, is usually involv Pathologically, the periductal sarcoma merely an exaggeration of the periduc fibroma or myxoma, the periductal co nective tissue being so rich in cells as

warrant classification as sarcoma. The relationship between the tumors is very close, and it is very seldom that a periductal sarcoma is found which does not present, in some portion, a typical picture of fibroma. Clinically, the periductal sarcomata are characterized by a comparatively moderate degree of malignancy, and the disturbances which they cause are likely to be more or less local in character.

In a certain proportion of the fibro-epithelial tumors of the breast, the epithelial formation completely overshadows the growth of the periductal tissue, the connective tissue simply constituting a support for the epithelial new growth. Tumors of the type, the cyst adenomata, occur as two distinct varieties, described by Warren: (1) fibro-cystadenomata, and (2) papillary cystadenomata.

The fibro-cystadenoma resembles the periductal fibroma very closely, the clinical findings are almost identical, the growth develops slowly, and without appreciable pain, and occurs most frequently in the periphery of the breasts of women from twenty-five to thirty-five years of age. The tumor itself may be single or multiple, and may range from the size of an almond to that of an orange. It is hard, rounded, elastic and freely movable; does not become adherent, and causes neither dimpling or discoloration of the overlying skin. The nipple is not retracted, and the axillary lymphatics are not affected. On section, the tumor presents a distinct capsule, and a more or less lobular structure, the stroma is white and glistening, but the fissures and clefts are rather more numerous than in the periductal fibroma, otherwise the appearances are almost identical. Microscopically, there is shown decided proliferation of the epithelial cells lining the clefts and cyst cavities.

The Papillary cystadenoma is of comparatively frequent occurrence, and undoubtedly presents the clearest and most characteristic clinical picture of any of the benign tumors of the breast. The tumors may be single or multiple, but unlike the tumors of the fibrous type, are found in the central, rather than the peripheral portion of the breast. They occur most commonly in the breasts of women from forty to sixty years of age, and especially those who have reared large families. The tumor may be so small as to be almost imperceptible on palpation, or it may be so large that it involves the entire breast. On palpation the small tumors feel hard, and more or less rounded; the larger ones may be elastic, or even fluctuating. The growth is slow, and in approximately one-half of all cases is accompanied by a degree of pain sufficient to attract the patient's attention, but not sufficient to cause any particular suffering. The most characteristic symptom is the presence of a serous or sero-sanguineous discharge from the nipple, this symptom being present in from sixty to seventy per cent of all cases. Not infrequently it is the appearance of this discharge which first attracts the attention of the patient to the developing tumor. As a matter of course

FIG. 3. Microscopic Section of Periductal Fibroma.

the presence of the discharge depends upon the patency of the duct leading from the cyst to the nipple. When the duct is patulous pressure over the tumor causes a partial evacuation of the cyst contents, and consequently a certain diminution in the size of the tumor.

On section a papillary cyst adenoma is found to be encapsulated, and to contain one or more cyst cavities, the cavities being filled to a greater or less degree by villous or papillary projections from the cyst walls, the fluid contained being serous or sero-sanguineous in character.

Microscopically, these outgrowths present a vascular, branching, fibrous tissue stalk

supporting a luxuriant growth of epithelial cells, the cells presenting the characteristics of ductal, rather than acinal epithelium. Under ordinary circumstances this epithelium shows no tendency to infiltrate surrounding tissues.

The clinical diagnosis is based on the location of the tumor near the nipple, the slow growth, the comparative absence of pain, the presence of the serous, or bloody discharge, together with the absence of axillary enlargement, retraction of the nipple or adhesions to the skin. The condition may be confused with periductal tumors, atypical parenchymatous hypertrophy and cancer. The periductal tumors occur in younger women; are more movable in the tissues, are peripheral, rather than central in location, are hard and elastic, and never cause a discharge from the nipple. A fibro-cystadenoma might readily be mistaken for periductal fibroma, and, to be perfectly frank, in many cases it would be impossible to make a positive differentiation without a microscopic examination.

FIG. 4. Papillary Cystadenoma of Breast.

As regards the prognosis in fibro-epithelial tumors of the breast, the tumors of the fibrous type show a decided tendency to sarcomatous change, while the tumors of the epithelial type show an even more marked tendency to carcinomatous degeneration. The percentage of the fibrous tumors undergoing malignant degeneration is as yet undetermined, but from data at hand I am inclined to believe that approximately ten per cent undergo such changes. Of the tumors of the epithelial type carcinoma develops in rather more than fifteen per cent of all cases.

1013 Venetian Building.

[Written for the MEDICAL BRIEF.]

Folds, Bags and Wrinkles of the Skin About the Eyes and Their Eradication by Simple Surgical Methods.

BY CHARLES C. MILLER M. D., AND FLORENCE MILLER, M. D.,
Chicago, Ill.

Folds and wrinkles frequently develop prematurely about the eyes of individuals, adding years to the apparent age. Bagging of the skin beneath the eyes not only adds somewhat to the appearance of age, but revolts sensitive people so that unfortunates so afflicted earnestly desire relief, if such is obtainable.

These conditions may be easily overcome by simple surgical procedures, which are performed painlessly with the aid of infiltration anesthesia. Results have invariably been good in my hands, and I see no reason to fear untoward consequences from the operations I practice. Preparations for these operations are simple. Any physician may equip his office so that he can do this work satisfactorily, and the technic calls only for ordinary surgical dexterity.

A hypodermic syringe, a keen scalpel, small, sharp scissors, fine cambric needles and fine sterile silk represent the instruments absolutely necessary for the operations.

Cleanliness is essential to prompt and satisfactory healing. The face of the patient and the hands of the operator should be scrubbed. Antiseptics may be used, though they are not essential.

These operations are painlessly performed after the tissues have been infiltrated with a weak cocain solution. By painlessly, I do not mean that the patient is hanging on to the table with both hands and praying for the early conclusion of the ordeal. The most nervous woman will quietly admit, during the operation, that she is suffering from no pain whatever.

Distention of the tissues with fluids produces insensibility to pain, but the injection of but few solutions will prove painless. A great deal of nonsense has been written about sterile water. I do not deny that sterile water will produce an absolute insensibility to pain. We have all known this for a good many years, but the injection of sterile water under ordinary circumstances is not a painless procedure. As a rule the injection of sterile water produces considerable discomfort. To obviate this a trace of cocain is added to the sterile water, and then the injection is painless after the needle has been coaxed into the skin.

For the operations under consideration about one-half an ounce of infiltrating solution is needed. I am in the habit of making up about twice as much as I expect to use. An ounce of boiled water should be taken under these circumstances, and one-fourth of a grain of cocain added to it. Cocain may be secured in tablet form for the purpose of making these solutions conveniently.

A hypodermic syringe which permits of sterilization answers very well for infiltrating, although I have, for the sake of convenience, syringes holding one, two and four drachms.

The infiltration technic is very simple. The needle of the syringe is coaxed into the skin, and a drop or two of the cocain solution deposited. The needle point is now pushed further into the tissues, and more fluid deposited. At the point of insertion of the needle sufficient solution should be deposited to cause a pallor of the skin. This will insure a painless reinsertion of the needle. The operator distends the tissues somewhat beyond the proposed lines of the operation, and distends the tissues moderately, testing the skin with the point of his needle to ascertain as to the sufficiency of the infiltration. If the skin is distended to the limit one is sure that the operation will be painless, but at the same time such extreme distention interferes with accurate judging as to the amount of tiss· which should be removed during the operation.

Wrinkles, folds and bags beneath the eyes are eradicated by the removal of a crescent of skin beneath the eye. The convexity of the crescent should be downward, and the concavity of the crescent should lie close to the lashes along the lower lid. The width of the crescent varies according to the depth of the wrinkles or the size of folds or bags. The first incision should be made with a sharp scalpel along the lid. The skin should be divided entirely, and loosened somewhat. It should then be drawn upward, the operator observing carefully just how much must be removed to entirely over-

Figure illustrates the line of incision in the operation below the eye. The crescent of skin is entirely removed. The size of the crescent varies according to the amount of bagging, folding or wrinkling of the skin. Above the eye the area of skin removed varies in shape, the operator simply picking up and cutting away the excess.

come the condition demanding the operation, then, with the scissors, the skin is cut away so that the crescent is made complete.

Just sufficient skin is left along the margin of the lid to permit the stitches being passed in closing. The line of union is brought in this way under the shadow of the lashes, and is entirely invisible.

Hemostasis should be complete before the skin intervals is closed. Bleeding is never troublesome in these cases. A few moments pressure with a small pad of sterile cotton will control it. Should the operator desire, the bleeding points may be twisted. Styptics are not needed. The approximation of the skin should be accurate. Continuous or interrupted stitching may be used according to the election of the operator. I use fine silk and fine cambric needles. Sutures should

not be tied tightly, as this favors cutting of the stitches so that stitch marks may be left.

The fold above the eye after infiltration is picked up and trimmed away. The line of closure here is at the upper extremity of the lid, so that the slight line of union is hidden in the fold between the lid and the brow, when the eye is open, and only shows slightly when the eye is closed. The proposition is a very simple one when operating above. The excess of tissue is cut away, and the skin margins of the interval accurately closed with sutures.

Dressing of these cases is somewhat important. Collodion dressings may be applied so as to remove all tension from the sutures; the sutures in such a case merely serving to insure accurate approximation of the skin margins.

A strip of cotton should be tucked under the lashes, and plastered securely to the skin with several coats of collodion. The collodion dressing is applicable above the eye as well as below.

70 State Street.

[Written for the MEDICAL BRIEF.]

Evident Truths in Connection with the Science of Medicine.

BY J. MOUNT BLEYER, M. D., LL. D., F. R. A., M. S.

New York City.

In a field, wide as that of medical science, there are many paths, seemingly parallel in the outset, but ultimately converging toward those higher truths and more general laws, which, here as elsewhere, must be regarded as the just object and end of all research.

There can be few better tests of a sound understanding, than the right estimation of medical evidence; so various are the complexities it presents, so numerous the sources of error. The subjects of observation are those in which matter and mind are concurrently concerned; matter under the complex and subtle organization, when vitality and all its functions are derived. Mind, in its equally mysterious relations to the organs thus formed; both subject to numerous influences from without, both undergoing very various changes from disease within. Individualities of each have their effect in creating difficulties, and these amongst the most arduous which beset the path of the physician.*

Few cases occur strictly alike, even when the source of disorder is manifestly the same. Primary causes of disease are often wholly obscured by those of secondary kind. Organs remote from each other by place and function, are simultaneously disturbed. Translations of morbid action take place from one part to another. Nervous affections and sympathies often assume every character of real disease, while remedial agents are rendered uncertain in effect by the various forms of each disorder, by the idiosyncrasies of the patient, by the difficulty of securing their equal application or transmission into the system, and finally by the unequal quality of the remedies themselves.

These difficulties, the solution of which gives medicine its highest character as a science, can be adequately conceived by the medical artist alone. Neither those accustomed to legal evidence only, nor such as have pursued physical science in its more simple material forms, can rightly apprehend the vast difference made by the introduction of the principle of life; or, yet more, of the states and phenomena of mind, in connection with bodily organization. We have here a new world of relations, occult and complex in their nature, to be reasoned upon and resolved; with a principle of change, moreover, ever operating among them, and deviations from nature under the form of disease, which render all conclusions liable in a thousand ways to error. It is the want of this right understanding of medical evidence, which makes the mass of mankind so prone to be deceived by imposture of every kind; whether it be the idle fashion as to particular remedies, or the worse, because wider, deception of some system, professing to have attained at once, which the most learned and acute observers have labored for ages in vain.

It must be admitted, indeed, that this matter of medical testimony is too lightly

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*Idiosyncrasy, as arising in most cases from inappreciable causes, is the most absolute and inevitable difficulty in medical evidence; since no accumulation of instances, such as might suffice for the removal of all other doubts, can secure us wholly against this source of error.

weighed by physicians themselves. Else whence the frequent description of effects and cures by agents put only once or twice upon trial; and the ready or eager belief given by those who, on other subjects, and even on the closely-related question of physiology, would instantly feel the insufficient nature of the proof.† Conclusions requiring for their authority a long average of cases, carefully selected and freed from the many chances of error or ambiguity, are often promulgated and received upon grounds barely sufficient to warrant a repetition of the trials which first suggested them. No science, unhappily, has abounded more in false statements and partial inferences; each usurping a place for the time in popular esteem; and each sanctioned by credulity, even where most dangerous in application to practice. During my years of practice of a quarter of a century, omitting all lesser instances, I have known the rise and decline of many fashions of medical doctrine or treatment; some of them affecting the name of systems, and all deriving too much support from credulity or other causes, even among medical men themselves.

Look at what is necessary, in strict reason, to attest the action and value of a new remedy or method of treatment. The identity or exact relation of the cases in which it is employed—a right estimate of the habits and temperament, moral as well as physical, of the subjects of experiment; allowance for the many modifications depending on dose, combination, quality of the medicine, and time of use;—due observation of the indirect or secondary, as well as direct effects;—and such observation applied, not to one organ or function alone, but to the many which constitute the material of life. All these things, and yet more, are essential to the completeness of the testimony. All can rarely, if ever, be reached; and hence the inevitable imperfections of medicine as a science. But much more, doubtless, of truth and beneficial result, might be attained, were these difficulties rightly appreciated, and the fit means obviating them kept more constantly in view.

In no class of human events is the reasoning of "*post hoc, propter hoc,*" so commonly applied, by the world at large, as in what relates to the symptoms and treatment of disease. In none is this judgment so frequently both erroneous and prejudicial. It would seem as if the very complexity of the conditions necessary to sound evidence, tended to beget acquiescence in that which is lightest and most insufficient for truth. The difficulties occuring in practice from this source are great, and require a right temper as well as understanding to obviate them.

Nor is there any subject upon which words and phrases, whether applied to disease or remedies, exercise a larger influence. Terms have descended to us, which we can hardly put aside;—maxims, which fetter the understanding and power of action;—and methods of classification, which prevent the better suggestions of a sound experience. And these are among the evils most aggravated by public opinion, ever prone to be governed by names, and particularly in all that concerns the symptoms and treatment of disease. The deeper the interest belonging to the subject, the greater the liability to error.

It needs to be called to the mind of medical men themselves how many organs of the body are still without a complete interpretation of their part in the animal economy. The uses of the ductless glands;—the spleen, thyroid, thymos and suprarenal bodies;—are yet only vaguely conjectured. The physiology of the brain and nervous system, then largely elucidated by the many fine researches of the past years, still abounds in difficulties, many of which time may overcome; while others are probably forever insuperable.

These are only a few instances indicative of one great source of error and embarrassment to which all medical proof is exposed. But in pathological doctrine, also, there is similar and equal difficulty from the character of the evidence concerned. It is only of late years that the improved power and refined use of the microscope has given us more assurance as to the nature and succession of these

† Amongst the other difficulties of evidence in such cases must be noticed the ambiguity of all language as applied to denote, and distinguish sensations; and evil familiar to every medical man, and only to be obviated by watchful experience.

changes; still leaving, however, various points open to future determination.

The history of contagious diseases furnishes another instance not less remarkable. It is the common belief of the world, and one plausible enough in its first aspect, that the laws of contagion are simple and readily learned. No mistake can be greater than this. All parts of the subject, even the circumstances most essential to practice, are wrapt up in doubt, and the evidence is of so intricate a kind, and so much disturbed by seeming exceptions, that the best judgments are perpetually at fault upon it. The same remark may be extended to other classes of disease, where time and the most acute observation have hitherto failed to extricate truth from the multitude of conditions present; but where, nevertheless, we have the certainty of relations hitherto undetermined, the fixing of which belongs to future research, and will well repay it in the result. The observations just made are not less true in relation to other departments of the science. Take the internal remedies. We employ, even those most familiar, and seemingly simplest in use. The difficulties already noticed as belonging to the evidence of their effects, extend yet further, and more remarkably, to the theory of their action; and our knowledge, though augmented of late years by the wonderful advance of organic chemistry and physiology, can scarcely yet be said to have passed the threshold of the inquiry. We must avow that this whole department of medical knowledge, so important in all its bearings, is the one where most remains to be done to raise it to the character of a science. The real amount of the deficiency can only be understood by a candid examination of the results of experience, and a fair comparison with other branches of physical knowledge.

To many, indeed, even of those conversant with practice, this will seem too disparaging a view of the science of medicine, and, in truth, the accustomed way in which the uses of medicine are taught, and the methodical forms under which they are classed and named according to their alleged effects, do favor the persuasion of a more advanced state of knowledge than that just described. It might be enough, perhaps, to refer those who doubt the reality of the view I have taken to what is unequivocally known of each one in particular. It will be found that ambiguities of language crowd around every part of the subject—that classification, while clearing away some difficulties, has created many more—than evidence, feeble in its origin, has often gained weight by mere transmission from one hand to another—and that this matter is peculiarly one where the prejudices and credulity of the world usurp upon the sense of the practitioner,—and warp his practical judgment.

If the truth be really as here stated, in regard to our knowledge of internal remedies, it is a feeble and useless policy to disguise what is thus deficient. The avowal may more readily be made;—first, because the difficulties to be overcome are greater than in any other science of observation or experiment;—and secondly, because, despite these difficulties, the scope and prospect of future attainment are ample and certain, and the connection with such other branches of physics, that the progress of each is fitted to throw light upon what is here doubtful or obscure. Already it may be affirmed that the recent methods of research in medicine have gained greatly in exactness, and the just appreciation of evidence, upon those of any previous period;—a natural effect of increasing exactness in all other branches of science; and, it must be added, of increasing and well-directed energy amongst those engaged in the profession. The deficiency just stated is greater, perhaps, than any other, and more difficult of redress; but time and various new means and appliances are in our hands, and it would be an injury done to the cause of science to doubt their effects.

A very special advantage we now possess consists in the application of numerical methods and averages to the history of disease; thereby, giving it the same course and certainty of result which belong to statistical inquiry on other subjects. We do not exceed the right expression of fact, in terming this method of average one of the most important principles of instruments of philosophic research. Little, if at all, recognized as such in former times, it has now become

a law in itself, and the index and interpreter of truth in every department of human knowledge. Under the guiding genius of the great Herschel and Struve it has been applied to the most profound questions in sidereal astronomy; while under a widely different use, it has been brought to the solution of some of the most curious problems of human life and social existence. The vast interval between is replete with examples of its successful application.

Averages may, in some sort, be termed the mathematics of medical science. It is obvious, indeed, that the value of inferences thus obtained, depends on the exact estimate of what are the *same facts*, what merely connected by resemblance or partial analogy. The principle in question is, indeed, singularly effectual in obviating the difficulties of evidence already noticed; and the success with which it has been employed these few years, by many most eminent observers, affords the only assurance of the results that may hereafter be expected from this source. Through medical statistics lies the most secure paths into the philosophy of medicine. This method of inquiry which so greatly distinguished Louis as a pathologist, may be noted as one of the eminent examples of this method, which is now pursued almost universally by the medical profession. Numerous results and generalizations have been accomplished by us, otherwise wholly unattainable in any other way; and, on the simple principle of averages, every year tends to enlarge and confirm these conclusions.

In looking further to the chance of overcoming these difficulties in the future, regard must be had to the principle now verified in so many cases, that in proportion to all complexity of phenomena, is augmented also the number of relations in which they be surveyed and made the subjects of experiment.†† The application of this principle to medical science is every day becoming more apparent. The fine expression of Laplace, "Tout se tient dans la claime immense des vérités," is well exemplified here. Every new path of physical knowledge opened, each simple fact discovered, has given guidance more or less direct towards the objects still unattained in physiology and the treatment of disease. The unexpectedness of some of the relations, thus determined and converted to use, is the best augury for further advances in this direction of pursuit.

A due estimate among medical men themselves of the nature of the proofs with which they have to deal is more especially needful now, when the older doctrines of physic and physiology, and in fact all allied branches, are all undergoing the revision required by modern science; and when new medicinal agents are every day produced upon trial, many of them dangerously active in their effects, many suggested by analogies which need to be verified by the most cautious experience. Hasty and imprudent belief may here become a cause of serious mischief;—the wider in its spread, as the minds most prone to this credulity are those most ready also to publish to the world their premature conclusions; and thus to mislead the many who found their own practice upon faith in others; or who seek after novelty, as if this were in itself an incontestable good.

And here I must advert to another circumstance which renders strict attention to the laws of evidence of matter of peculiar obligation at the present time. This is the tendency, so marked in modern physiology, to carry its researches into the most abstruse questions connected with vitality, the nervous power, and the relations of mental and material phenomena—inquiries justifiable in themselves, but needing to be fenced around by more than common caution as to testimony, and the conclusions thence derived. Yet here especially it is that such precautions have been much disregarded;—partly, it may be, from the real difficulty and obscurity of the subject—still more, perhaps, from the incompetency of many of those who have taken it into their hands. For these researches, no longer confined to a few as heretofore, have become the property and pursuit of many who wander merely in the confines of science, believing they are within its pale; and whose speculations on what they see are

††M. Comte, in his "Cours de Philosophie Positive," has defined this as a general law, through which compensation is made for the difficulty or impossibility of giving a mathematical form to certain branches of physics, such particularly as relate to the phenomena of organic bodies.

little checked by collateral knowledge, or by a due estimate of the laws and limits of scientific inquiry. The mystery of the subject is in itself a charm and seduction to the mind. They see and give attention for the first time; to those wonderful phenomena, which, though inherent in the constitution of man, and in the relation of his mental and corporeal nature, are not familiar to common observation. The feelings are thereby excited even more than the reason; and belief is hurried on and results accredited, with little care for the sufficiency of proof, or knowledge of the many facts which otherwise explain, or conflict, the conclusion. However earnest the desire for truth, imposture rarely fails to mix itself with inquiries so conducted; and increases the practical evil which always, more or less results from error. Every philosophical doctor is bound to watch over these events as they pass before him; never refusing inquiry, because what is put forward is new or strange; but requiring evidence in proportion to the unusual character of the facts; sifting closely that which is offered, and rejecting all conclusions not founded on this basis.

While speaking on the question of evidence as applied to these subjects, it is impossible not to advert to the fact—a very important one in the history of the human mind—of the great diversities of intellectual constitution as to this point. It is in truth a striking expression of the difference of the reasoning power, testified on the most ordinary occasions of life, and very remarkably where the subjects rise to the character of science. Locke has well said: "There are some men of one, some of two syllogisms, and no more; and others that can advance but one step further." The distinction here expressed applies closely to every question of evidence. One man concludes upon proof which to another has neither weight nor pertinency. One mind pursues a subject throughout all its relations; another follows but a single line toward the results. "Some men, in passing through the boundless ocean of disquisition, mistake fogs for land." There are others whom Lord Bacon calls "ill-discoverers, who think there is no land when they can see nothing but sea." Such, indeed, are these natural disparities, as in many cases to preclude any mutual understanding or communion of the reasoning power.

In commenting on these facts we can not rightly exclude the remark that a certain amount of speculation, duly guided, enters into the purest form of inductive science. Even could the mind be restrained from excursions beyond the strict bounds of evidence, such restraint would be a wrong done to that genius, which has often through these speculations opened a path to new and more certain knowledge. Instances of success, thus obtained, might be drawn from the history of the most eminent philosophers, and from the records of every part of physical research. It is not hypothesis, but conclusions founded on false or faulty evidence which are the bane of all philosophy.

I must further add here, that in questions of medical evidence there may be an excess of skepticism as well as for credulity. Sometimes this occurs in effect of a temperament of mind (not uncommon among thinking men) naturally disposed to see all things under doubt and distrust. There are other cases, where the same feeling, not originally present, grows upon the mind of physicians who have been too deeply immersed in the details of practice. The hurried passage from one patient to another precludes that close observation which alone can justify, except under special circumstances, the use of new remedies or active methods of treatment. From conscience as well as convenience, they come to confine themselves to what is safe, or absolutely necssary; and thus is engendered by degrees a distrust of all that lies beyond this limit.

Though such skepticism be less dangerous than a rash and hasty belief, it is manifestly hurtful in practice, and an unjust estimate of medicine as a science; both as it now exists, and as it is capable of being extended and improved. No one can reasonably doubt that we have means in our hands admitting of being turned to large account of good or ill. Equally unreasonable would it be to distrust the knowledge gained from a faithful experience as to the manner of using these

means,—and others which may hereafter become known to us—safely and beneficially for the relief of disease. The actual progress of medicine during the years in all that regards the principles of the science, as well as the details of practice, is the best testimony for the present and assurance for the future. As respects the two extremes noticed above, it is certain that there is a middle course, which men of sound sense will perceive; and to which they alone can steadily and consistently adhere, amidst the many difficulties besetting at once the judgment and the conduct of the physician.

I am rather led to these remarks on the nature of medical evidence and the causes, moral as well as physical, affecting it, by looking at the wonderful advances which have lately been made in all branches of science; not merely by the addition of new facts, but yet more by new methods and principles of research, by instruments of greater delicacy, and by increasing exactness of details in every point of inquiry. The effect of these changes has been (and it is a result the grandeur of which can be understood only by those who have pursued their progress) to bring the physical sciences into much closer relation with each other, pressing them on by converging paths towards that unity of principle which is the object and end of all true philosophy. I can not here do more than allude to the profound researches through which dynamical forces—the phenomena of chemical, electric and magnetic action—and those of light and heat—and several other advances have been submitted in so many cases to common laws; and the whole associated with the great doctrine of atomic elements, acting and combining in definite proportions throughout every part of the material world. These generalizations, great though they are, do not narrow the field of the future inquiry; but give fresh space, new objects, and higher incitements to those who may pursue such researches hereafter.

The dissimilarity of the proofs, and the greater difficulty of their certain attainment, must ever keep practical medicine in the rear of other physical sciences, notwithstanding its closer association with them through the laws of animal physiology and organic chemistry, so largely explored of late years. But its still wider scope of usefulness requires that this distance should be abridged as far as possible, and on no occasion be lost—by improved methods as well as by new facts—by more cautious observation and more exact evidence—of maintaining its place and connections among the other greater objects of human knowledge.

836 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

Mental Healing.

BY R. C. CAVE,
St. Louis, Mo.

Those who preach the gospel of mental healing tell us that sickness is to be cured by disbelieving it, and firmly believing in the universality of divine truth, goodness, or God. As to just what is the curative agent that brings healing to the sick man who thus denies sickness, they speak in vague and general terms, and leave us somewhat in doubt.

They can not mean merely to affirm that mind acts on body, and that our beliefs may, and to a considerable extent do, affect our physical health; for that is admitted by the medical men against whom they inveigh, as well as by themselves. I have known more than one physician who, finding the patient not seriously ill, and needing nothing more than mental treatment, administered bread pills.

And, surely, mental healers do not mean to affirm that physical disease can be cured by the mere act of believing. Physical disease is either a fact, or it is not a fact. On the assumption that it is not a fact, it can not be cured at all; for there is nothing to cure. On the assumption that it is a fact however brought about, it can not be cured by the mere act of disbelieving it. In the nature of things, facts can not be made other than they are by our beliefs about them. If a man eats poisonous mushrooms, believing them to be esculent, his belief can not alter the fact that they are poisonous, and save him from their poisonous effects. If a man's lungs are diseased, whether by mortal mind or something else, his belief

that they are sound does not make them so. Besides, if the relief of pain depends on the sufferer's belief that he has no pain, it can not possibly be effected; for such a belief gives the lie to his consciousness, and is a mental impossibility. The pain is there. He is conscious of it. He may persistently deny it; but he can no more believe that it does not exist than he can believe that he himself does not exist.

Mental healers then, as I understand them, do not mean that the cure is effected by the mere belief of the patient; but they mean that the patient's belief calls into exercise in his behalf the healing power of God. They cite the alleged miraculous cures wrought by Jesus in support of their claims, and lead us to infer that their cures are effected in the same way—that as divine power was put forth to cure the sick who, turning from material aids, came to him in faith; so divine power will be exerted now to heal those who, refusing the help of doctors and drugs, lift their minds and hearts to the Universal Spirit for help. So, we are told, Mrs. Eddy read the story of the man who was healed of the palsy, and "the power which gave him strength, she felt. The life divine which healed the sick of the palsy restored her."

Thus the theory of mental healing seems to be in line with the old conception of divine providence, according to which, God, as Luther said: "powerfully and miraculously preserves and defends" those who trust in him. The mental healer, in substance, says to the sick man: Deny your sickness; believe in the all-pervasiveness of the good; thus bring yourself into accord with truth, love, goodness, or God, and you will be healed by divine power, as the sick were healed by Jesus. In some wonderful way, your organs, however diseased they may be, will be restored to perfect health, so that they will perfectly perform their proper functions. A miracle will be wrought on you, like that said to have been wrought on blind Bartimeus.

Of course, men of the medical profession deny this theory. They do not believe in miraculous cures. They do not deny that God heals the sick; but they maintain that, whatever we may call the power that heals, it effects the healing through the action of natural forces—cures by the use of natural means. In many cases (such as are said to be cured my mental healers), the natural forces of the body, making for health, are able to throw off its ailments. In other cases, these forces are so weakened that they can not throw off disease without the aid of medicine which, by its action, works with them to produce the desired result. In any case, it is nature effecting the cure.

But God is in nature. The forces of nature, animate and inanimate, are but different forms of the one divine energy. The properties of medicine, as truly as the powers of mind, are expressions of this energy. Hence, what is effected by the one, as well as what is effected by the other, is effected by God; and, even if mental healing were true, it would be no more divine than healing by the use of medicine.

[Written for the MEDICAL BRIEF.]

General Remarks of the Pelvic Floor.

BY BYRON ROBINSON, B. S., M. D.,
Chicago, Ill.

In general there are numerous conflicting views regarding the structures and utility of the pelvic floor. Even the name is not settled with either anatomists or gynecologists. Also it is of remarkable interest to observe extensive and varying differences between the views of the anatomist and gynecologist as to structure and function of the pelvic floor. The word perineum comprehended the structure at the exit of the pelvis for many years. It may be well to mark the limitations of structures by simple definitions, so that definite onamatology may lead to definite conception of structures. There are three terms employed by writers, viz.: 1, pelvic floor; 2, pelvic diaphragm; 3, perineum—which should be defined.

1. The *pelvic floor* is composed of all the anatomic structures in the pelvic outlet which support the viscera and resists the intra-abdominal pressure. The pelvic floor comprises the structures between skin externally (distally), and peritoneum

internally (proximally), and which combine to close the pelvic outlet. The elements of the pelvic floor are: (*a*) peritoneum, (*b*) fascia, (*c*) muscle, (*d*) skin, and (*e*) viscera. The following table presents, in a bird's-eye view, the elementary anatomic structures of the pelvic floor:

ANATOMY OF THE PELVIC FLOOR.

A) Peritoneum.

(B) Muscles.
- I, Anal Group.
  - 1, Levator ani.
  - 2, Coccygeus.
  - 3, Pyriformis.
  - 4, Sphincter ani externus.
- II, Pudendal Group.
  - 5, Sphincter vaginæ.
  - 6, Erector clitoridis.
  - 7, Transversus perinei profunda.
  - 8, Transversus perinei superficialis.

(C) Fascia.
1. Levator ani fascia, proximal and distal.
2. Obturator fascia, proximal and distal.
3. Coccygeus fascia, proximal and distal.
4. Pyriformis fascia, proximal and distal.
5. Sacral fascia.
6. White line (arcus tendineus.
7. Perineal layer.
   - (a) superficial fascia, superficial layer.
   - (b) superficial fascia, deep layer.
8. Trigonum urogenitale—triangular ligament.

(D) Skin.

(E) Viscera.
6. Bladder, 23.
7. Urethra, 24.
8. Vagina, 25.
9. Uterus (key), 26.
10. Rectum, 27.

2. The *pelvic diaphragm*, diaphragma pelvis, I shall limit to three structures, viz.: (*a*) the levator ani fascia, proximal, (*b*) levator ani muscle, (*c*) the levator ani fascia distal.

In other words, the pelvic diaphragm consists of the levator ani muscle with its proximal and distal fascia. Some writers describe the pelvic diaphragm as the anatomic pelvic floor, while the sacral and pubic segments is the physiologic pelvic floor.

3. The *perineum* is practically the pelvic floor. At present, by some writers, the term perineum is limited to the skin space between the distal ends of rectum and vagina. The perineal body is the "fusion point" of perineal structures. The term perineorraphy, at present classically fixed in medical literature, indicates that it attempts to repair damaged structures in the pelvic floor resulting from parturition, or other causes—respiration (splanchnoptosia). Recent labors have attempted to classify the pelvic floor structures and functions, and to utilize them in repair.

The names of Berry Hart, Schatz, Tait, Dickinson, Sellheim, Hanks, Studdiford, Burtenshaw, Webster, Harris, Newman Dorland Marcy, Thompson Holl and others have added to the progress of the pelvic floor repair.

The structures involved in the repair of a defective perineum are muscles and fascia. The operative procedure consists of denudation with coaptation or flap-splitting methods. Notwithstanding the successful claims for the varied surgical methods of coloperineorraphy, the anatomical basis is neither generally nor perfectly understood. It is probable, however, that the essential success lies in the reunion of the separated levator ani muscle by means of its fascia proximal (superior), and distal (inferior), with some other fasciæ, and also that this success has been chiefly due to deep suturing. The object of this essay is to demonstrate that the chief factor in successful colpoperineorraphy is the restoration by the aid of deep sutures of the fasciæ, especially the levator ani fascia, proximal and distal.

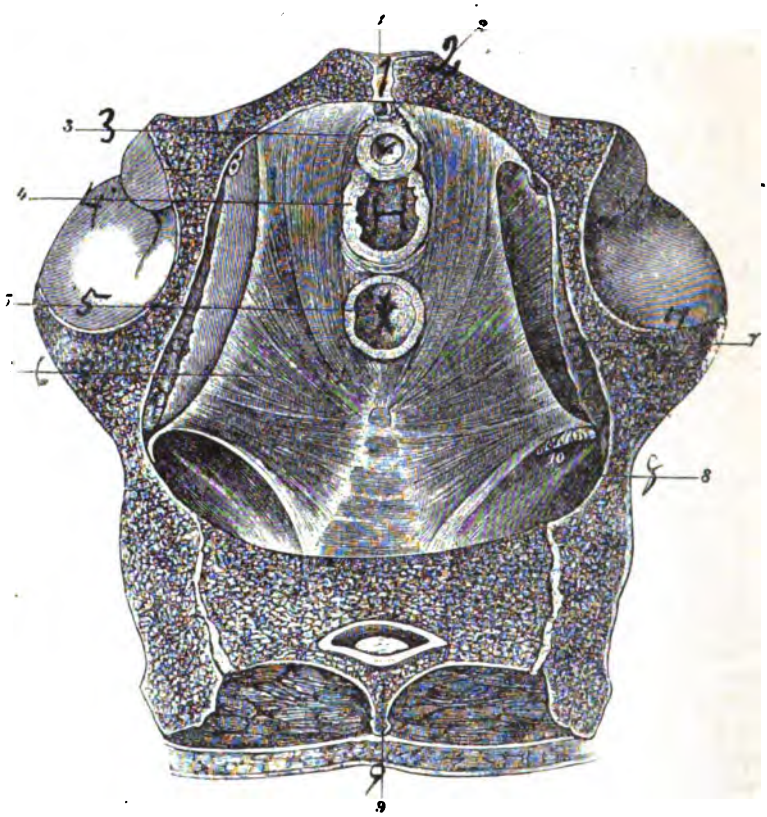
The muscles of the pelvic floor may be divided into two classes: *a*, the deep layer—the levator ani coccygeus and pyriformis; *b*, the superficial layer—the transversus perinei, bulbo-cavernosus, erector clitoridis and sphincter ani externus. A peculiar characteristic of the muscles of the pelvic floor, and one which demands respect in colpoperineorraphy, is the extensive fascial attachment, one or both ends of the muscles. The levator ani, the bulbi-cavernosus and the transversus perinei have a fascial attachment. We will consider in detail the muscles and fascia involved in colpoperineorraphy. The basis of this labor is a careful anatomic investigation with considerable clinical and surgical experience.

The diaphragma pelvis, or anatomic pelvic floor, is a fascio-muscular floor, and lies in bony space of the pelvic exit. The pelvic exit is closed by the diaphragma pelvis and the triangular ligament. The white line—condensed fascia—in man's pelvic fascia is a special development due to erect attitude. In general, the function of the pelvic floor is to control the constriction of the anus and vagina, aid

in parturition, to offer resistance and support of the pelvic and abdominal viscera. The major factors in function and structure of the pelvic floor are the levator ani muscle, with its levator ani fascia, proximal and distal. The levator ani muscle, with its levator ani fascia, proximal and distal; is materially assisted to strengthen the pelvic floor by the condensation of the transverse perineal fascia, or what is termed the ischio-perineal ligament, because of its attachment to the tuberosity of the ischium and perineal body. The pelvic floor is not a rigid transverse partition, it is an elastic and movable structure. The main object of the pelvic floor is to maintain the weight of the abdominal viscera, to accommodate parturition and resist intra-abdominal pressure. Dissection is superior to all other methods in gaining a knowledge of the nature of the pelvic floor, character and complex arrangements of its structure.

THE ELEMENTARY STRUCTURES OF THE PELVIC FLOOR.

In the following pages remarks may be offered as to the part played in the pelvic floor by its elementary anatomic structures: (*a*) peritoneum, (*b*) muscle, (*c*) fascia, (*d*) skin, (*e*) viscera—anatomically, physiologically and pathologically (*i. e.*, in repair).



MUSCLES OF THE PELVIC FLOOR.

FIG. 4. The musculature of the pelvic floor viewed from the proximal side after removal of the levator ani fascia proximal. 1, symphysis pubis; 2, perivesical tissue, ligamentum, vesicum ventrum; 3, neck of bladder; 4, vagina H-shaped; 5, rectum; 6, musculusi obturator internus; 7, arcus tendineus; 8, musculus pyriformis. This illustration presents the muscular bundles, loops surrounding the vagina and rectum. It suggests the direction of the levator ani contraction. (Savage.)

(A). THE PERITONEUM.

The *peritoneum* of the pelvis plays its chief role by maintaining with considerable vigor the pelvic organs in definite relations, conducting vessels, nerves and

structures in ordered plans and preventing organ entanglement. The peritoneum aids to a distinct degree in maintaining the strength of the pelvic floor or pelvic diaphragm. Its strong, smooth, shiny surface enables the viscera to glide on each other with minimum trauma. The peritoneum is an important and powerful factor in the utility of the pelvic floor.

(B). THE MUSCLES OF THE PELVIC FLOOR.

The function of the perineum or pelvic floor is exercised through musculature—*i. e.*, contraction and relaxation, constriction and control. The major functions of the pelvic floor are: (*a*) support of the pelvic and abdominal viscera—*i. e.*, resistance to intra-abdominal pressure, (*b*) control of the anal apparatus, (*c*) control of the vaginal apparatus, (*d*) aid in parturition. The above noted four complicated functions of the pelvic floor are dependent on intact muscles. We will divide the muscles in the pelvic floor (perineum) in: 1, the anal group, which are intimately related to the anus; 2, the pudendal group which are intimately related to the vagina. The following table presents the two groups of muscles of the pelvic floor:

Muscles of the Pelvic Floor.	I, Anal group.	1, levator ani. 2, Coccygeus. 3, Pyriformis. 4, Sphincter ani externus.
	II, Pudendal group.	5, Sphincter vaginæ. 6, Erector clitoridis. 7, Transversus perinei superficialis. 8, Transversus perinei profunda.

We will present a brief, practical description of the anal and pudendal groups of muscles:

Muscles of the pelvic floor combined form a muscular diaphragm which aids to strengthen the pelvic floor. However, since the levator ani, the chief muscle, is of marked thinness, of limited quantity, the muscular support must be limited. I shall adopt the simple practical division of the pelvic floor muscles as: 1, the anal group; 2, the pudendal group.

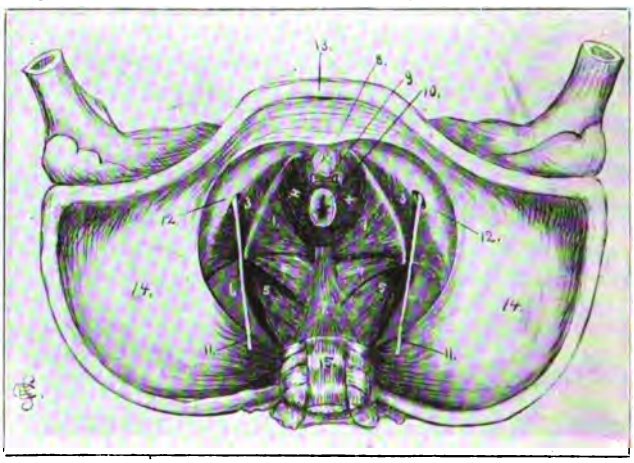
I. ANAL GROUP.

The anal group of muscles are intimately related to the anal apparatus.

1. *Levator ani muscle.*—The levator ani muscle is, perhaps the most difficult to understand as regards its form, insertion and function. The origin of the muscle is sufficiently plain, and is considered established by anatomists. Few agree as to exact insertion, even at this late day, and opinions vary as to the exact function, form and insertion of this muscle. My personal investigations demonstrate that there is a foundation for these varied opinions: (*a*) the *insertion* and *origin* of the levator ani vary as to the exact extent of distinct muscular loops which embrace the rectum and vagina, as to the tendinous raphe (between muscle loops and distal ends of the coccyx), also regarding the precise relation of the vaginal wall, whether muscular or connective tissue, and also as regards the exact relation to the muscle of the distal end of the rectal wall. Moreover, its partial fascial origin and insertion is sure to endow the extremities with varying appearances as to the length of the fascial (or tenderness) conditions; in other words, the distance of the red muscular fibers from the extreme origin and insertion of the levator ani vary. Perhaps this variation and insertion may be explained by considering the levator ani as a rudimentary muscle, and to be disappearing with the tail. Its double fascial accompaniments complicate its origin and insertion, as well as the interpretation of its function; (*b*), the various opinions as to the *form* of the levator ani are explained by differences as regards sex (idiosyncrasies of individuals, disturbances from gestation and parturition, variation of the shape of the pelvis and fascial insertions and attachments; (*c*), the different views as to *function* of the levator ani lie in confusing its function with the levator ani fascia proximal and distal, in exaggerating its dimension and attributing to it function and utility belonging to other genital supports. It is especially erroneously inferred that a muscle will act as a continuous tensionized support for any viscus. The knowledge of the levator ani muscle is fragmentary and difficult of access. Its dissection is far from easy, and its adjacent relations are complicated. The muscle does not resemble a funnel, with the rectum or vagina at the bottom or apex, but is more similar to a sling, a flat loop or a horseshoe, which does not draw the rectum or vagina directly proximalward, but

draws the two canals ventralward and proximalward toward the pubic arch.

The muscular loop of the levator ani muscle resembles a horse's collar encircling the rectum or the vagina. In the female it vigorously controls two canals—rectum and vagina—yet its control of the vagina depends on that of the rectum. The rectum being forced ventralward against the middle of the dorsal vaginal wall, produces the H-shape to the vagina. The excess of vaginal wall is compelled to fold at the sides producing the upright columns of the H. It is very thin, diminutive in thickness. In an excellent specimen which I dissected from a woman exceeding usual corporeal dimensions, the origin arises from the dorsal surface of the pubis. It begins about half an inch from the symphysis, and one and one-half to two inches distal to the pubic crest. This line of origin is about two fingers wide, or one and one-half inches, and does not meet its fellow of the opposite side, one-half to one inch existing between them on the dorsal surface of the pubis, which is occupied by the obturator fascia. The bundle of muscles originating on the dorsal surface of the pubis passes distalward and dorsalward to embrace the vagina and rectum. This is the pubic sling, or horseshoe loop, which is quite thick and strong in some cases, and very thin and membranous in others. The



MUSCLES OF THE PELVIC FLOOR VIEWED FROM THE PROXIMAL SURFACE WITH THE LEVATOR ANI FASCIA SUPERIOR REMOVED.

FIG. 5. This cut is drawn from a female pelvis dissected by myself and intended to show the muscular floor of the pelvis from which fascia is dissected: 1, 1, the levator ani muscle; 2, 2, the white line or origin of the levator ani; 3, 3, the obturator internus muscle; 4, 4, the coccygeus muscle; 5, 5, the pyriformis muscle; 6, 6, the inner wall of the pelvis; 7, 7, sacrum; H, H, the horse-shoe loop of the levator ani muscle, drawn darker; 8, the Y-shaped urethra; 9, the vagina, cut close to the pelvic floor, whose wall does not flare like the radial wall, 10; 11, 11, the obturator nerves; 12, 12, inner wall of pelvis; 13, pubic crest; 14, 14, iliac fossa; 15, last (5th) lumbar vertebra. (Dr. Schoeler was the artist).

levator ani muscle was so thin as to be really membranous, and the muscular band between the vagina and rectum is but a few lines in thickness. It is really a pelvic diaphragm.

The muscle should be considered as to its origin, course and insertion.

Origin.—The levator ani muscle arises from bone, from the dorsal surface of the pubis and ischial spine, or from fascia, arcus tendineus and vesicopubic ligament. The bony origin is the dorsal surface of the pubic bone and ischial spine. The larger portion of the levator ani of bony rounded margin of the loop, which is applied against the sides of the vagina and rectum, is often the thickest part of the muscle. The muscular bundles of the horseshoe loop join those of the opposite side of the levator ani dorsal to the vagina and rectum without an intervening perineal tendon or raphe. In some dissections it is absolutely plain that no tendinous raphe exists, while in others it can not be told.

The *smaller* portion of the levator ani of bony origin is from the *ischial spine* immediately ventral to the origin of the

coccygeus muscle. Quite a distinct strip one-fourth to one-half inch wide arises from the ischial spine, and can be plainly followed by the eye to the horseshoe loop.

The *ligamentous* origin is from the ventral ligament of the bladder (ligamentum pubo-vesicale), and from the arcus tendineus (white line). The fibers of the levator ani which arise from the ligamentum pubo-vesicale are of little practical importance. The white line extends in a slightly curved direction from the dorsal lateral surface of the pubis, over the obturator foramen to the spine of the ischium. The central end lies two and three-fourths inches below the ileo-pectineal line, with a length of about four inches. The white line (arcus tendineus) is a part or an extension of the ventral true ligament of the bladder, a thickening of the levator ani fascia proximal. In the white line, the muscular fibers arise as fine tendinous bands, crescentic in form, and may show their reddish muscular nature at the white line or a short distance from it. The most distal portion of the arcus tendineus is about two inches distal to the ileo-pectineal line. The white line, arcus tendineus, the crescentic, curved line of ligamentous origin of the levator ani, is profoundly connected with the pelvic fascia, and the muscular fibers of the levator ani begin as tendineous fibers which variate from the white line. The ligamentous origin of the levator ani muscle is the blended coalesced and powerful fibrous, fascial planes of the levator ani, proximal and distal. The muscle may shade into a flat tendinous layer before it reaches the white line. The proximal tendon of the levator ani muscle varies much as to its relations with the white line. It may arise distal to it as well as from it. The white line may project into the pelvis as a tendinous fold, and be capable of being separated from the origin of the muscle.

Course.—The course of the fibers of the horseshoe loop of the levator ani muscle is dorsalward and distalward in two fleshy bundles, the smaller coursing along the lateral and dorsal surface of the vagina, and the larger coursing along the dorsal and lateral wall of the rectum. The loop which passes along the sides of the vagina seems to be attached to the vaginal walls by connective tissue only, while the loops of muscular fibers which embrace the rectum interweave and blend with the muscular bundles of the rectal wall, forming a strong connection. The part interwoven in the rectal wall acts as an elevator. It would appear that in some cases the loop of the levator ani interweave

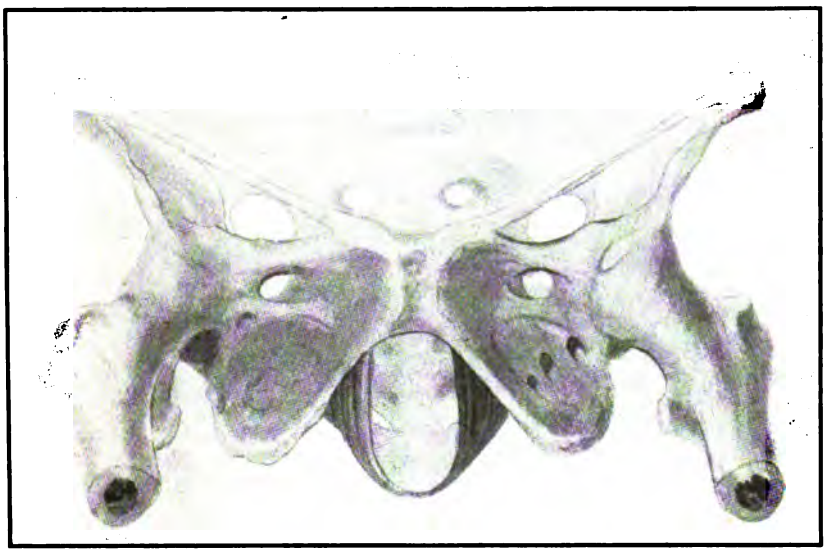
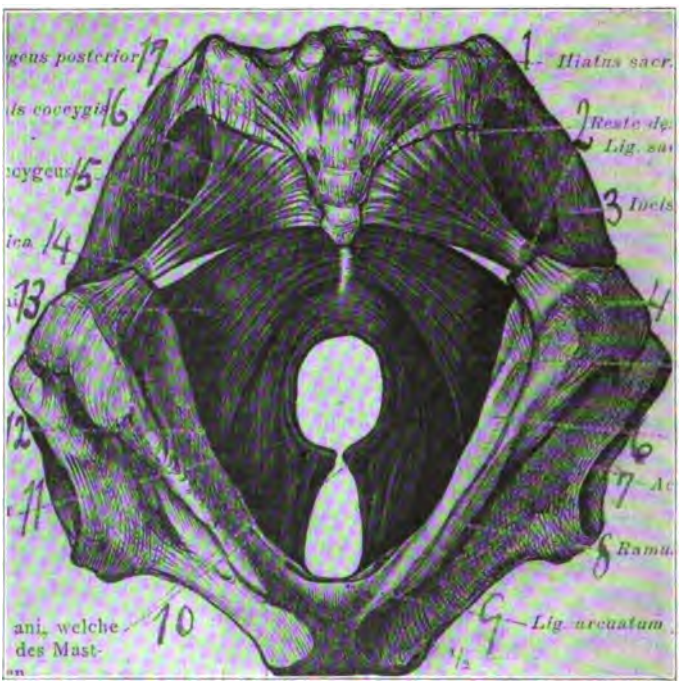


FIG. 6. Levator ani, as seen with the pelvis in a semi-recumbent position (modified by Dorland from Dickinson).

with the muscular fibers in the wall of the vagina. The part of the levator ani which passes between the vagina and rectum is a small, thin band, one-sixth to one-eighth of an inch in width, which arises from the external part of the pubic origin, and passes over the large belly of the muscle to gain the recto-vaginal situation. Its relations to the wall of the vagina are very close, if not interwoven with its fibers.

The part of the muscle of fascial origin which arises from the white line, passes dorsalward and distalward, becoming part of the levator loop, and partly inserted in the tendinous perineal raphe and the last bone of the coccyx. Many of these fibers pass distalward in a curved direction, and when near the median raphe they turn acutely dorsalward to become inserted into the coccyx. A few of the muscular fibers arising from the white line, as well as from the horseshoe-shaped loop, together with some from the ischial spine, embrace the rectum. The part of the levator ani arising from the ischial spine becomes inserted chiefly in the coccyx. Yet one may observe one-fourth of an inch in width pass around the rectum with no intervening tendinous raphe.

The part of the levator ani muscle of special interest to the gynecologist is the two-finger-breath horseshoe-shaped sling which arises from the dorsal surface of the pubis and passes dorsalward and distalward to embrace both rectum and vagina. It is the belly of this loop which gives the rectum its ventralward curve immediately proximal to the anal end which is turned dorsalward. It is the rectal sphincter portion of the muscle. It is this part of the muscle which becomes hypertrophied in vaginismus. It is the portion of the muscle torn, elongated and separated in lacerated perineum. It is the portion of the muscle which may retard labor, create violent vaginal spasm, and may prevent coition or digital examination, and, in rare cases, prevents the penis from escaping until relaxed by an anes-

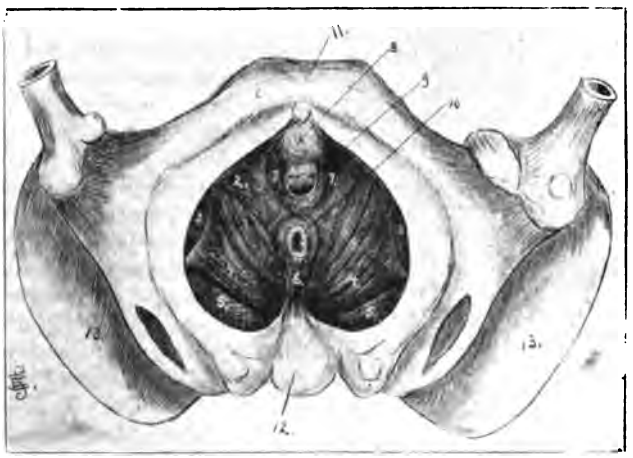


THE MUSCLES OF THE PELVIC EXIT.

FIG. 7. 16, apex ossis coccygis; 15, musculus coccygeus; 14, spina ischiadica; 13, musculus levator ani (pars iliaca); 12, musculus levator ani (pars pubica); 11, remnant musculus sphincter ani externus; 10, bundle of the levator ani muscle which is located on the ventral surface of the rectum. The pubic and iliac segments of the levator ani are plainly visible (illustration from Carl Toldt).

thetic. In most cases the levator ani dorsal to the rectum may be divided into three quite distinct parts, viz., (*a*) the part which is connected to the last bone and fascia of the coccyx. The fibers accompanying this portion of the muscle originate chiefly from the dorsal end of the white line, or at the ischial spine; (*b*) a portion of the muscle forms a median tendinous raphe for about one-third of an inch immediately ventral to the coccyx; (*c*) the portion of the muscle immediately dorsal to the anus, about three-fourths of an inch in width, has no intervening tendinous raphe (not always distinct), and consists of the belly of the loops which originate and insert on the dorsal pubic surface. In other words, the muscular fibers of each side anastomose, forming the horseshoe-shaped loop, with no intervening tendinous raphe. Some of the loops intertwine with those of the sphincter ani, which pass dorsalward to the tip of the coccyx, also some of the muscular fibers of the sphincter ani externus are continuous with the loops of the levator ani. The fibers of the levator ani originating from the white line pass dorsalward and distalward, however, on arriving at the median raphe; many of the fibers turn sharply dorsalward to be inserted into coccyx, and rapidly become tendinous. The levator ani fascia proximal is not very intimately attached to the proximal muscle surface, and may be compared to the fascia transversalis. The levator ani fascia distal is quite adherent to the muscle.

From this description of the levator ani from actual dissection, it will be observed that the insertion of the levator ani is: (*a*) at the opposite side of the pelvis from the identical location of its fellow origin; (*b*) to a limited degree in the median tendinous raphe; (*c*) some fibers may be inserted in the coccyx, rectum, vagina, perineal body, external rectal sphincter.



LEVATOR ANI MUSCLE VIEWED FROM THE DISTAL SURFACE.

FIG. 8. This is a cut drawn from a female pelvis dissected by myself. It illustrates the distal surface of the muscular pelvic floor. On the left side the levator ani fascia distal is not dissected off, while it is on the right side, showing the distal surface of the levator ani muscle. 1, 1, shows the levator ani muscle with its parallel bundles; 2, the levator and fascia distal; 3, 3, the obturator internus muscle; 4, 4, the coccygeus muscle; 5, 5, the gluteus maximus; 6, anococcygeal structure; 7, 7, the horse-shoe loop of the levator ani, showing some muscular bundles coursing between rectum and vagina. It is not so large in area on the distal surface as it is on the proximal surface of the pelvic floor. 8, urethra; 9, vagina; 10, anus flaring; 11, pubic arch; 12, sacrum; 13, flaring ilium. (Dr. Scholer was the artist.)

Deductions in regard to the levator ani muscle may be numerous. Certain practical considerations may be drawn from a careful study by dissection and in gynecologic practice. As it was originally a muscle of the tail, it is becoming vestigial in man, shown by its fascial connections. From the origin, course and insertion of the levator ani muscle, it must be viewed as the all-important muscle of the pelvic floor.

(To be Continued.)

[Written for the MEDICAL BRIEF.]

Treatment of Erysipelas of Trunk and Extremities by the Continuous Warm-Water Bath.

BY DR. A. ROSE,
New York.

PRACTICAL NOTES, NO. IV.

There exist numerous remedies against erysipelas, but the most rational, the most reliable against erysipelas of trunk and extremities is very little known, at least I did not see it mentioned in literature ever since I spoke of it, about fifteen years ago, when I presented two cases before a medical society, which were published in the year 1890.

In the year 1888 I saw, in consultation with Dr. Treskatis, a woman who was suffering from erysipelas of hand and forearm. The inflammation had existed several days. One physician had ordered ice application, the second, Dr. Treskatis, who had called me in consultation, had prescribed an antiseptic ointment. I found the patient with high fever, and complaining of pain. The left hand, the left forearm, and part of the lower third of the upper arm erysipelatous. I had at once the arm suspended in a warm bath—an oval-shaped, large wash-kettle serving as bath-tub—a hammock was improvised from muslin, reaching from one handle of the wash-kettle to the other, in which hammock the arm was placed so that hand and elbow were on a level. When I saw the patient again on the next day, fever and pain had completely subsided; the appetite, which had been wanting, had returned; corresponding with this change for the better the general condition was perfectly satisfactory, and this was the end of the erysipelas.

The second case was that of a boy of three years. The erysipelas had proceeded from an apparently insignificant abrasion at the knee. On August 5, 1889, the mother noticed a circumscribed redness in the region of the injury; on August 7th she consulted a druggist in the neighborhood, who prescribed for the child for three days. On August 10th, at night, the little patient was brought to my office. There was erysipelatous inflammation extending from the toes all the way up to the upper third of the thigh. The temperature was 105° F.; the child, with a phenomenally strong voice, was screaming constantly. At that time there was so much praise given to a new method introduced by two eminent surgeons, Riedel and Kraske, that everybody, having a case of erysipelas of the extremities, would give it a trial. In this case of the boy of three years I myself gave it a trial. Under chloroform narcosis I washed the affected limb first with soap and water, then with ether, and finally with a five per cent solution of carbolic acid. After this I made the scarifications in the sound skin all around the border of the erysipelas, and covered the whole leg with gauze, saturated with two per cent carbol solution, and ordered that this gauze should be kept moist continually.

When I saw the patient later in the night, about three hours after I had applied the Riedel-Kraske dressing, he had been resting quietly, for the first time in several days. I did not measure the temperature for fear of disturbing the sleep. Next morning I found a temperature of 103.5° F. The erysipelas had over-stepped the scarification. The powerful voice of the boy was heard incessantly, alarming the whole house. I removed at once all dressing, placed the patient in a bath-tub filled with warm water, and watched the effect. After having been in the water only a few minutes he commenced to feel comfortable. In the evening the temperature was normal; the child slept all night in the bath. No rise of temperature on the following day and evening. The general condition, likewise, being all that could be desired, I had the patient taken out of the water, neither fever nor pain returned, and this was the end of the erysipelas symptoms in this case.

The warm-water bath is of wonderful effect in case of pain. I can not understand why there are so many remedies and methods, for instance, against combustion, while we have in the continuous warm bath the really ideal means of treatment of combustions of all degrees and extents (except the head). It keeps the wounds aseptic, and relieves pain better than anything. Napoleon, on St.

Helena, appreciated this calming effect; he remained sometimes for days in the warm-water bath to find relief from his pains, caused by cancer of the stomach and liver. In his testament he wrote: "If my body is to remain imprisoned on St. Helena after my death, I desire to be buried at the foot of the spring to which I owe so much relief." The fountain of which Napoleon speaks was situated quite a distance from Longwood, and Sir Hudson Lowe, on account of the trouble it gave to carry the water for the bath, wanted to deprive Napoleon of the latter, saying: "Why does he want to stew himself in hot water?"

The explanation of the action of the warm bath in erysipelas is so simple that the everyday man can understand it, but this seems to be the reason that the great men in the profession will not pay attention to it.

It is an established fact which nobody can take out of the world, that the continuous warm bath exerts an irritation on the skin, in consequence of which the vaso-motor nerves are influenced, causing dilatation of the blood vessels. Dilatation of blood vessels means acceleration of circulation of the blood. Accelerated circulation in the parts submersed in warm water causes the products of inflammation and infection in these parts to be taken up, carried away and eliminated through the general circulation. This is, in a few words, the explanation how the continuous bath acts in erysipelas.

In my book, "Carbonic Acid in Medicine," I have given the full description of the physiological action of the continuous bath, and beg to refer to these explanations. Here I will confine myself to a few words: There is a difference between hot and warm baths which we have to consider seriously. The hot bath (about 120° F.), can not be borne for more than a few minutes; it is of great service under certain conditions and circumstances, but it is not to be thought of in the treatment of erysipelas. The warm bath of a temperature of about 98° to 100° F., is well tolerated for any length of time; for days, weeks, months, and cases are on record in which, in the treatment of skin disease, patients had been kept in the warm water bath continuously for over a year.

Since I reported the two cases here described, I have always treated erysipelas of the extremities in the same manner, and invariably with the same gratifying result. I would give quite a voluminous report, but the two first cases are so striking, giving such unmistakable facts, that I think they may suffice to induce our colleagues to try the continuous warm-water bath in erysipelas, and to report the results for the benefit of the profession at large.

[Written for the MEDICAL BRIEF.]

The Dynamics of After-Life

BY AXEL EMIL GIBSON, M. D.,
Los Angeles, Cal.

"There is more between Heaven and Earth, my dear Horatio, than all our philosophy has ever dreamt about."—HAMLET.

In Touch With Impalpables.—We had met—my deceased friend and myself—under circumstances which the thoughtless would attribute to the empire of chance, but which the philosopher appreciates as integral and law-governed parts in the eternal fitness of things. Though born and raised under antipodal signs of nature and culture, we had yet imbibed the same fundamental aspects of life and destiny, impelled by the same inappeasable passion for knowledge, to pursue, rationally and scientifically, the dynamics of after-life.

She died, as we all do, from failure to fully understand and fully live up to the minutiæ of the plan embodied and ensouled in the free, rhythmic throb of the world-life. She died in my arms, sane and hopeful, philanthropically not less than intuitively convinced that death should cause no arrest of her evolution, but rather be instrumental in opening up new fields of research and realization.

But before she died, she had whispered between the hectic convulsions: "Gerald, if I am to change the theater of existence for some more needed experience, I shall endeavor to communicate with you, and lay before you scene after scene of the panorama of after-life."

These words alone consoled me for the loss of her cherished earthly association. For in the light of that promise her departure became merely nominal. As souls and thinkers we ignored death, fixing our attention with unquestioning certainty on the conscious continuation of individual identity beyond the threshold.

About a week after her death, while sitting in my library and looking through some of her posthumous notes, with a view of publishing them, I suddenly felt a cold draft of air with great force strike my face, while the room was rapidly filling with the odor of putrid flesh, peculiar to the presence of a corpse. Looking up from my work, I beheld in front of me a dark, shrouded form, swaying from side to side, as if exposed to a heavy gale, a form which I instantaneously recognized as belonging to my deceased friend. A drab-colored tunic, covering head and body, parted at the flurry of a gesture, and uncovered a face emaciated and careworn, and over-drawn with deep-laid lines. From two deep, dark sockets I saw the piercing light of her eyes shine with intense and nervous energy.

She articulated syllables with great rapidity, coloring her sentences with German, French and English idioms—languages with which she had been familiar while on earth. But did she really speak?

I saw the lips moving, the hands gesticulate, the spare form swinging to and fro, and yet the excitation of my sense of hearing, resulting in an intelligible response in my mind to this epiglottic stream of ideas, did certainly not come over the path of the eighth cranial nerve. The waves of vibratory motion gave rise to verbal utterance without being accompanied by sound. Did a receiver in some of the departments of the vast *terra incognita* known as "psychic centers" register waves of motion along "wireless" paths, and reflect them over the *roads of Corti* into the mediating and interpreting agency of the mind, and there start reactions in terms of audible sensations? Or was the entire process a direct registration of the soul in terms of sympathy and feeling, introducing the descriptive imagery of the mute speaker into my consciousness without involving the cumbersome agency of cerebral machinery.

"Do not grieve," she articulated with great vehemence, "grief is pain—a missile of agony darting through the soul of those to whom it is directed. Please do not grieve."

Strange to say I was neither shocked nor surprised. I listened to her statements with the same interest and philosophical absorption as in former days, when we used to discuss problems of life and destiny. Interrogating her about the effect of grief as a purely subjective force, I spoke aloud at first, but, startled at the sound of my voice, and with a sudden realization of the inappropriateness as well as needlessness of vocal utterance, I proceeded to formulate the thoughts in my mind, without translating them into words.

She referred to grief as a species of thoughts, and as such possessing qualities characteristic to the latter. Like thought, it is a carrier of emotion. And, furthermore, as grief stands for the realization of all that we failed in doing or undoing for the departed while they were yet with us, a realization intensified and magnified by the consciousness of our utter helplessness in regaining lost opportunities of demonstrating to them our faith and affection, it follows that the energy with which grief charges its messages carries a tremendous potency, embodying in its impulse all that is dynamic and forceful in our personal nature. If to this we add the fact of common experience that thought has the power of changing the nature of gross, molecular substance, as witnessed in its action on the anatomical and physiological groupings of our body—thereby giving expression to character—it can be readily realized what effect grief must have on the soul itself when the latter is no longer shrouded and protected by a gross physical covering.

"The pain which your grief inflicts on my soul is indeed real, and strikes me as resembling the piercing, lancinating sensations experienced by the victims of locomotor ataxia at a certain crisis in their progressive break-down. I assure you again that these sensations of grief have to me the entire reality of objective touch, streaks of lightning, leaping through and through my quivering substance, crossing and recrossing my sphere

of identity until my entire nature feels honeycombed by invisible, trackless, uncontrollable arrows of flame. Ah, I beg you, do not grieve! If mothers realized the pain their grief inflicts upon the very objects of their love, they would wipe away their tears, and replace them with a smiling and hopeful countenance. For sunny, cheerful, hopeful thoughts are like stimulating draughts for a thirsty and tired-out body. Oh, ye mourners and grief-stricken lovers of the dead, give joy, not grief, strength, not—"

The words grew fainter and fainter, and finally became inarticulate and lost in a stream of unintelligible mutterings. Simultaneously, changes of dissolution appeared in her features, which began to lose their lineaments and gradually fade out of objective vision. A moment later the phantom was dissolved, and the four walls of the room, which for the time being I had lost sight of, again enclosed me as concrete and impenetrable as ever.

I describe these and the following scenes as minutely and *ad verbatim* as my memory enables me. If an illusion, then I am not less illusioned than the reader. The whole matter stands before me at once, incredible, yet real; a fairy tale, and yet concrete history.

It is needless to state that I henceforth stopped grieving, and gave my whole thought-life a higher vital tone, charging every feeling with perennial buoyancy and hopefulness.

About a month after this experience, in the early twilight of a Swedish winter day, in which country at the time I was sojourning, while sitting in my library, wrapt in memories of the past, and with my eyes resting on a miniature portrait of my dead friend, I suddenly felt the strange, chilling, uncanny touch of a damp, malodorous garment creeping over me. I at once became conscious of the presence of my dead friend, and recognized with no surprise whatever, the appearance immediately in front of me, of her old dear face, wrapt in the same loose, dark-colored garment as when I last saw her. She seemed to move in a sphere of intense excitement; waves of stirring emotions dashed over me like breakers in an ocean surf, while her hands and features twitched as under the strain of a tumultuous, though half-suppressed agitation. In her attitude she gave the impression of trying to resist some invisible but over-powering force, against the influence of which every minute of her time had to be bought by unceasing struggle.

She pointed backwards over her shoulder, and as I followed with my eye the direction of her finger, I scanned a vast unconfined expanse of space where spectral forms seemed floating along currents of unceasing agitation as if under the resistless action of a mastering force, compelling its ghastly, wreathing, rebellious cargo to assume the definite attitude and momentum of a preconceived plan of adjustment.

Straining my attention, I observed that the uncanny creatures of this forbidding habitat were not only shifting their positions, but also forms and characters. Apparently in response to some internal impulse of feeling. their forms, now and again, with lightning-like rapidity projected some grotesquely exaggerated member of their plastic, jelly-like organisms. Lips would all of a sudden swell out into a hideous monstrosity, involving in its formation almost the entire creature. Similar changes occurred in other functions and parts of these constantly shifting forms. Ears, noses, tongues, etc., increased and decreased in size and character, portraying the entire range of progressive or retrogressive changes of moral life, and thus giving rise to a pantomime, at once hideous and interesting, in which every ruling emotion portrayed itself in the size and expression of the projected organ.

This ghostly carnival swept onward in a circling motion without a sound. I shut my eyes to gain a relief from the infernal performance, only however to realize that their objectivisation in my *optic thalami* did not depend upon the activity of my organs of vision. They belonged to the great class of what might be called optical "wireless," which depends on no external sensation for its manifestation, but appears as realities to every mind, attuned to a corresponding key of vibration.

Dante and Milton must have been able to sink their minds self-consciously and deliberately to these depths of existence, with which they seemed to have been as

familiar as with the topography and ethnography of their own native countries.

"This is my present home," said my unfortunate friend, "and here is where I experience the fate of Hamlet's dead father, who found himself—

"————confined to walk in fires
Till the foul crimes done in my days of nature
Are burnt and purged away. But that I am forbid
To tell the secrets of my prison house,
I could a tale unfold whose lightest word
Would harrow up thy soul, freeze thy young blood,
Make thy two eyes, like stars, start from their spheres,
Thy knotted and combined locks to part.
But this eternal blazon must not be
To ears of flesh and blood————."

"I burn," said my friend, resuming her weird tale, "yet the fire which consumes me is not the elemental destroyer which goes under that name on earth. It is a fire of anguish that consumes whatever of my nature that is destructive in this state of life. It is the fire of a fever—a soul-fever—weeding out and consuming the toxic elements of selfishness, the moral corruption, accumulated during a life lived mostly for self, and inspired by egoistic motives. It seems to divide or dissect the subtlest compound of my nature, as if the very atoms were laid bare and honeycombed. I experience the presence in my nature of a corrosive force pulsating through my consciousness, and eating away every tendency and desire that connects me with the sense-world. All notions of personal stature and advantage, all inclinations for sensual indulgencies, all fears, ambitions, envies, jealousies—every notion arising in my mind of being a separate, exclusive and self-sufficient being, with interests and hopes, ideals and destinies, which in any way distances me from my fellow-men—are being mercilessly burnt out by these ever-present, inescapable flames of searching, dissecting light."

She shrunk together, collapsing from the strain under which she seemed to labor, but rallying again, rose up and continued in the sombre pathos of the inevitable, at once expressing rebellion and submission:

"Oh, how little mankind realizes the mass of worthless ballast it drags along on the voyage of life, retarding and endangering its progress. Verily, we are sailing with a corpse in our cargo. I look upon my past life with unspeakable disgust. It seems to me almost as if it were void of every redeeming feature of positive unselfishness, of freedom from any taint of personal, self-seeking motive. And when all this final balancing and clearing-up business is over, how little is worth survival in the larger, eternal life of the liberated soul. All the strain for social benefits and positions, vanities of style, and impressiveness of stature, literary fame, political power, intellectual domineering, any ambition, any ideal, any hope; if only aiming at personal advancement in some form or other, constitutes a most horrid and unreasonable waste of life, time and energy. To love humanity in motive and service is the only legitimate expression of life. All the rest of life is forfeited, wanton, hopeless."

But her storage batteries of sustaining psychic energy were exhausted, and the stream of her communication seemed lost in the gulf-streams and whirlpools of emotions sweeping through this spectral abode. An invisible force, not unlike the suction at work in a vacuum pump, seemed to pull her backwards to the zone of dark phantasm from which she had momentarily escaped.

As her power of resistance weakened, the force of suction seemed to increase, until finally, tottering under the overpowering strain of this thousand-armed monster-force, she lost her equipoise, and suddenly, as if caught by a cyclone, was swept headlong away from my field of vision to re-enter the dominion of living phantoms.

The Trail Brightens.—For some time I saw nothing of my departed friend. My business of late had rendered my existence somewhat fluidic, and landed me for a season at the extreme end of the Scandinavian peninsula, in the little isolated commonwealth of *Haparanda*, which while the northernmost city of Sweden, nevertheless during its short, two months' long summer season, exhibits all the voluptuousness and fascinations of a tropical vegetation.

One evening in the heart of June, while sitting by myself on a granite boulder, a little distance out of town, with an intensely blue dome above me, and a dream-

land of verdure, flower and fragrance below me, with the lingering after-glow of a recent sunset illumining the towering mountain-peaks of the majestic Areskutan —the Sierras of Sweden—gradually my thoughts sank into the events of the past, pursuing in imagination the movements of the strange being, who while dead, still remained to me a living companion. For some time, however, perhaps three months, I had not seen her, and my interest in her unknown vicissitudes largely absorbed my mind during my leisure hours. All at once a cold shiver crept over me, giving rise to a sensation, which having no basis in the almost tropical temperature of my surroundings, flashed into my mind the idea of its possible association with the presence of my friend.

I mistook not. Before me stood the object of my thoughts. But ah! how changed. The fear, despair, and agony which at our last meeting were visible in every feature and every gesture, had been displaced by a lofty submissiveness and dignified repose. She looked at me with a full eye, expressive of at once tenderness and power, compassion and will. What a noble, superb animation, beaming with interior light, passionate devotion and irrevocable resolve!

"I am out of Inferno," was syllabled in my consciousness. "The grossness of my nature is removed, but my soul is still in the throes of birthgiving. Freed from the noxious weeds of selfishness and impurities in all its hydra-forms of life, I am at present placed under the action of an environment which compels my purged nature to develop entirely new and unsuspected powers."

She paused for a moment, as if to collect and formulate her thoughts. While waiting for her to continue, I noticed the change in her robe, which from the old shade of dark drab had assumed a color of cream, streaked with light blue.

"My evolution," she continued, "in this posthumous realm has hitherto been largely negative and eliminative, while at present it is passing over into a positive, constructive and organizing phase of consciousness. My soul is budding into self-consciousness, and my mind is beginning to wield a self-sustaining, self-determining power. But I shall try to put before you the factors at work in the process of my unfoldment.

"As a basis to start out from, I will refer to the life of ordinary humanity, where self-consciousness mostly consists in reactions of the mind to external impressions. The minds of the great majority of people are a blank on which gossip, sensations, sight-seeings, travels, accidents, stirring vicissitudes, etc., scribble down their incongruous contents. External stimulants in one or another form of sensation lie back of and support the entire structure of what goes to make up most people's actual self-consciousness.

"Now if sensation were suddenly to stop its generative processes, and not a ray of light or life be permitted to enter the mind through the agency of the five senses, what then? Would not the individual find himself in chaos and night, very much like awakening from a sleep when bereft of the powers of hearing, seeing and general sensation, a state of existence which corresponds to my own experience upon awakening from the shock imparted to me by the death of my physical body? I woke up dazed and bewildered, without any power to communicate with the order and expressions of life and consciousness peculiar to this supersensuous plane of existence, where consciousness manifests in terms of life quite different from what I experienced through the function of the senses. Thus being divorced from my sensory vehicle on which I had so largely depended for guidance in my subjective as well as objective existence, I found myself not only inadequate to deal with the intelligences of the new world, but also rendered powerless to reassume my interrupted relation with the old sense world.

"Yet here are some phases of this subjective after-life to which I have been able to respond—phases related to the emotional forms of imagination with its selfishly passional and sentimental indulgences so characteristic of sense-life. Hence, every notion associated with forms of fear, worry, anxiety, envy, dislike, desire, vanity and unbrotherliness or selfishness, in any of its thousand-tongued expressions, constituted the only stock of my available knowledge responding to my power of recognition—a fact

which opened up to me the morbid contents of the awe-inspiring *inferno*, which in spite of its hideous dwellers represented in principle the main expression of the life with which I had retained familiarity. Everything else was largely a blank, on which I now and then discovered flitting presences of transfigured beings diffusing pulsations of a faintly palpable zone of holiness.

"For only such stages of consciousness, with which we have the power personally to identify ourselves during earth-life are recognizable during the immediate stages following death. Powers and qualities are not generated through the mere change called death; nor do the eternal laws and principles of the universe suspend their operations because an individual passes over from one state of existence into another.

"'As below so above,' said Hermes: In Heaven or on Earth—in life or after life—we are that and no more, which we have attained to through self-conscious exertion in the one or other direction.

"And as the character of man is expressed in his form, so the quality and power of his soul can be traced in the influence they exert on his physical evolution expressed in his demeanor and attitude to trials and vicissitudes of general existence.

"I am now developing subjective consciousness, *i. e.*, the power of the mind to reflect and verify life and its meaning in perfect independence of sensory or functional aids. Had I been given less to social functions, less to outer, sensational, transitory and purely personal interests, and in place devoting my time and power to cultivate acquaintance, through meditation and aspirations with my own soul, I should find fewer obstacles to overcome in my present state of evolution."

Notwithstanding my friend's austere denunciation of the manner in which she had spent her physical life, she was not by far as much "given to social functions" as are the great majority of our society ladies. But she was not without a fondness for gossip, and enjoyed plunging into the social swirl with all the enthusiasm of her sex. It was for the first time, in the after-life, that she learned to appreciate the full meaning and value of time—an appreciation which came out with full force in the ardor of her self-disapproval.

"In what way do you develop your subjective powers in your present state?" I queried in my mind.

"Ah, by enforced, absolute solitude and silence. Look at that endless, solitary trail leading on, and on, surrounded by sterile rocks without a spear of vegetation, or a motion or wingstroke of animated existence. Silence of death everywhere, or perhaps more correct, the silence of a new, higher, but as yet inexperienced life. I feel compelled, by some resistlessly directing inner power, to pursue this terrible, endless destiny without companionship or semblance of life and consciousness in any form. My sense-nature is absolutely at rest, being bereft of every opportunity to assert itself, and without any means of self-preservation—thus compelling the impersonal, supersensuous soul-nature to unfold its slumbering powers. For it is in the arrest and silence of the animal life that the divine life arises to the surface through channels and media formed by the new and greater demand on life, to yield a higher and purer expression. For like any other force or energy, the stream of life follows the lines of least resistance. Hence, as in my present mode of existence, the pursuit of the purely supersensual—thought and feeling, uncontaminated by sensational representations—offers less resistance to the soul than any other line of advance, it follows that the growth of my divine nature is irresistible even though the process of unfoldment proceeds slowly and under the stress, not to say the agony, of a veritable spiritual birthgiving. For what is growth but a series of birth-givings, by which the old modes and expressions of life are giving way to new and higher ones, more adequate to the enhanced and intensified presence of spiritual consciousness.

"Now, Gerald, I ask of you a favor of friendship and faith. Be my conscious and unfaltering companion in this soul-stirring, life-refashioning solitude. Send me thoughts of cheer and hope—in fact be with me as soul. Form in your mind a strong picture of my situation, and place yourself in thought by my side.

Tell our mutual friends to do the same. I almost feel too weak to carry out the task of my glorious evolution. Like a plant removed to unfamiliar environments with which it has to struggle to reestablish its elemental adjustment, so my soul in its new environments feels itself trembling in the balance, between something new, urging its right to live, and an old, refusing to surrender its hold on life."

The last words came to me as if in a whisper. The force enabling her to sustain the undoubtedly very severe strain involved in her concrete communications, was exhausted, and with a gesture of parting and a smile of hope she withdrew from the scene, floating away in a sphere of subdued light, evidently to resume her trail of conquest and discovery along avenues of undreamt-of realizations.

And this forms my last direct communion with that released soul. Yet twice afterwards I have had glimpses of her presence, though for each time she appears more remote from my own stage of evolution. Each time her garments seemed brighter and more ethereal. The last time I saw her, she appeared to me like a being of light, transfigured and luminous, "trailing clouds of glory," as she floated seraphically in the radiant zone of an indescribable superspectral azure, seemingly in possession of the "blue flower" of immortality—the imperishable price of spiritual life, for which she had been suffering so much pain with so much patience.

But must we consider this departure of the human soul into new and undreamt-of spheres of life as identical with a final closing of the individual's mundane experience? Shall our lives henceforth be spent under unequal terms of evolution and remain incapable of yielding new opportunities of love and service through personal identification?

With regard to this momentous quest—propounded by every feeling, loving heart during all time and ages—I feel unshakably calm and affirmative. I have her promise of reunion, somewhere, somehow. She has whispered in my heart that such a union may not require for its immediate theater the ethereal beyond, but be reached on this earth, in the very midst of concrete life. I am inspired with the consciousness that we may meet, and shall meet, in the mutual pursuit of new truths, new ideals, new realizations, new possessions which may require corporeal conquests for their attainment; face to face, and heart to heart, with the palpitating, surging, rising and falling waves of an ever moving ocean of humanity. For may it not be that the priceless pearl of truth is to be found only at the bottom of life, in the crevices and nooks of personal, concrete, face-to-face experience.

Back of every price is conquest; and there is something in the depths of my consciousness that affirms that Earth, with all its sadness and sorrow, its tragedy and farce, has possessions—vital and indispensable—which can be won only by a conquest of treasures, bound up and hoarded in the very bosom and vortex of mundane vicissitudes. It is the old legend of Siegfried, the Nibelungen, having to pass over slain dragons and outwitted giants to find his Rheingold. And while earthly existence, even in its highest form of evolution, may never yield opportunities for final perfection, yet it may furnish conditions and modes of existence, without which the towering eminence of spiritual self-consciousness, with its timeless and changeless consummation would only remain airy abstractions.

And furthermore, may it not be, that in the recurring phases of alternating concrete and abstract existence—objective blossoming, subjective fruition, with the soul drawing sap and sustenance from its organic and vital contact with earthly conditions by repeated evolutionary sojourns—is found the *modus operandus* by which the soul is enabled to transmute the crude elements of human virtues into the imperishable powers and felicities of changeless, timeless, and deathless beings.

German and American Physicians.

There does not seem to be much difference in the average income of German and American physicians, as owing to a report by the Medical Chamber of Berlin and Brandenburg the average income of Berlin doctors is $2,250 per year. It seems, though, that in the case of one thousand three hundred and twenty-two of them the yearly average is less than $1,250.

[Written for the MEDICAL BRIEF.]

The Relations of the Science of Chemistry to Medicine.

BY HOWELL B. GWIN, M. D.,

Nashville, Tenn.

Science Is Organized Knowledge.—We have natural and physical sciences, treating, respectively, of the outer and inner constitution of matter. Chemistry, or the study of chemical force, treats of the constitution and changes of matter, determining these by analysis and synthesis. Medicine deals with the cure, alleviation, or prevention of disease. Its main pillars are anatomy, physiology, and chemistry.

Medicine and chemistry, strictly speaking, are not recent in their origin. The oldest books of the Jews, Greeks, and Chinese contain records of their use. In every science there must first be a period for the collection of facts, a period of chaos, slowly yet surely dismissed by the majestic command of reverent students, "Let there be light," and followed by the reign of classification. No science in its practical results can be absolutely exact or perfect. Generation after generation it grows, by the elimination of the false and the acquisition of the true. Projecting its theories as so many working hypotheses, true science is grounded only on facts, but happily unexplained, unclassified facts are yet beneficial.

Chemistry and medicine stand closely and practically related. Chemistry is a larger and more independent science than medicine. It may be said that the former is a generalism, the latter a specialism. It is the province of each to furnish facts to the other for use or explanation, and to both thoughtful physicians ever address questions. When chemists exhibit substances with definite properties, physicians reflect, "Can these avail in medicine?" Pathologists present the characteristics of an epidemic, physicians ask chemists, "Can you add to *materia medica* an antidote of the causative poison?" Thus their interdependence appears in this era when sciences have been more correctly formulated and more closely interwoven.

Chemistry Aids Medicine.—First, in the study of the chemical structure of human tissues.

In late years, Chemistry has given vast information respecting the composition of the human system. The anatomist in locating the bones, muscles, organs, etc., is fired with a desire to know their constituent elements. The physiologist in studying the functions of the body is possessed of the same burning desire, deepening into a demand for essential aid from the chemist. The chemist fraternally responds by revealing the constituents, proximate and ultimate, of the frame, its organs, and its fluids. He defines the presence, degree of union, and the value of these elements which secure to this "fearfully and wonderfully made" being such balanced and multiplied offices as solidity and flexibility, hardness and softness, opacity and transparency, sensibility and insensibility, and motion voluntary and involuntary. No analyses within the range of chemical experiment are so difficult, so instructive, so beautiful as those which fix the composition of the blood and the various secretions which aid in its manufacture or facilitate its work. Through what painstaking, toiling research, and close-knit reasoning and experiment themselves an inspiration and example to the physician—the physiological chemist is annually enriching our medical science. Without chemistry the eyes of the physiologist are blinded as if by a cataract, his steps hindered almost as by a ligature.

The tissues, the blood, the secretions and excretions are chemical compounds. Physiological processes are chemical reactions. The mere circulation of the blood is brought about by mechanical means, but the source of the propulsive power is a chemical process, and the circulation has for its end and result a chemical reaction.

To specify: respiration is a true example of combustion. The seat of combustion—which is simply a process of chemical combination—is the lungs. The substance burnt is sugar. The products are carbonic dioxide gas and water. Every man then is a small chemical laboratory. Our bodies are furnaces continually burning, whose fuel is our flesh, and whose smoke is the breath of our nostrils. In every muscular effort, whether a blow, a breath, a word or a

step, a portion of the tissues concerned undergoes this chemical change, and motion, voluntary or involuntary, can no more be produced in the animal body without a combustion of its tissues than it can be generated in a steam engine without burning fuel under its boiler. We do not create the force; we do not originate it; we merely excite it. Whence, then, the source of this force? This question will be answered under another division.

Armed with such weapons from this scientific arsenal, the medicist draws his logical inferences as to the remedies he requires for external or internal use; and these are chemical compounds whose effects, not yet well understood, depends upon chemical reactions.

Chemistry Allies Itself With Medicine, in the discovery of medicinal properties in substances.

Of all departments of medicine, chemistry promises the brightest future. Once chiefly analytical, it has become enthusiastically synthetical. The future growth and triumph of medicine depends upon the new unions of what has been called, perhaps unscientifically, organic chemistry. Already it has accomplished wonders, and the introduction of antiseptics and anesthetics into the practice of surgery and obstetrics mark one of its greatest triumphs.

In its yearly contributions to *materia medica* it shows that there is virtually no limit to the substances which can be made. A celebrated French chemist has made a calculation with acids of certain alcohols. He says, if you gave each a name, allowing a line for a name, then printed one hundred lines in a page, and made volumes of one thousand pages, and placed a million volumes in a library, you would need fourteen thousand libraries for your catalogue. He, therefore, properly calls such bodies infinite, instancing the synthetical construction of the alcohol and aldehyde series, of the organic acids, of the amides, of urea, and of the millions of possible bodies which loom in the future—certain to be made, waiting to be made, the possessors of qualities suspected or unsuspected, but unknown.

What scientific physician believes that all anesthetics have been discovered? Chemical reasoning suggests that by rapidly making one hundred inspirations per minute we effect temporary anesthesis sufficient for the extraction of teeth without pain—that bisulphide of carbon may be used to relieve headache—that chloroform and ether in equal parts may safely be entrusted to a wise physician in violent cases of neuralgia—that, all honor to Pasteur, these latter may put in temporary abeyance an incurable disease, like hydrophobia, in its progress deathward.

Awaiting the revelation of the chemist are specifics for diseases. At present quinine seems to be the only remedy which may approach the title of specific—though some have given this title to cod-liver oil. The probable provision of the Supreme Physician of many specifics has doubtless often occurred to the mind of the toxicologist who has been so largely guided and blessed by chemistry, aye, whose occupation, like "Othello's," would be "gone" but for chemistry. To chemistry we may hopefully look for the discovery of specifics for cholera, diphtheria, scarlet fever, yellow fever, and certain zymotic diseases which are now so little under our control.

At present the exact chemical value of agents to the human constitution is known as a series of ultimate results. The real *modus operandi* of many of the most powerful is yet unknown. The chemist is investigating this, and, through the aid of his test-tube, crucible, etc., and of the microscope, and of comparative physiology, this problem will not show itself insolvable in the face of many another, once as difficult, which has been solved in his and other fields of investigation.

With his prime object to develop his science rather than limit it to the aiding of medicine, the chemist is better able to explode old theories, to discover discrepancies between facts supposed to be established, and to multiply his contributions to *materia medica*. It was the result of the labors of professional chemists that we have added to our pharmacopœia so many remedies, notably, chloral and salicylic acid. But sometimes the very romances of experimentalists bring benefit—as when alchemy, which, as Liebig has remarked, "was never at any time differ-

ent from chemistry," besides having gained a knowledge of the properties of bodies, contributed mercury to our *materia medica*, and also as when the modern evolutionists enlarge our knowledge of the parasites that infest our bodies, which knowledge has already modified sanitary regulations in a remarkable manner, and will force into the hands of superior physicians the microscope and test-tube to answer questions once unanswerable, though on them hang issues of life and death.

(To be Continued.)

[Written for the MEDICAL BRIEF.]

The Evolution of Tyranny.

BY JOHN A. WELSCH, M. D.,
Farber, Mo.

At no time in the history of the human race has tyranny ceased to exist, the difference being in degree, and nowhere is the truth of this statement more vividly demonstrated than in the history of the medical profession. The first physician to use chloroform for the relief of labor pains in Germany was banished from the empire under the charge of violating a scriptural quotation in relieving pains of this character. The tyranny in our profession is manifested largely in sectarianism, and physicians are banished from medical societies and called quacks and charlatans for disagreeing with the opinions of a certain combination of doctors (?), and they proceed to organize legislative committees whose duty it is to secure the passage of laws in the various States placing the liberty of all physicians in the hands of a few appointive politicians. If you wish to know how successful this giant medical octopus has been, read the statute of your own State, which pretends to be a law to regulate the practice of medicine, but which really establishes a medical tyranny in your State not equalled by any of the edicts of any Czar in existence. Physicians have a right to demand (when accused) a trial in the established courts of the land. But the octopus wills that a certain small coterie of political appointees shall be your accuser, judge and jury at their own pleasure. They can ruin, in no time, the reputation you have spent a fortune and the best years of your life to obtain, and you have no recourse under the law. Of course, these statutes are unconstitutional; because the constitution emphatically says that no citizen shall be deprived of life, liberty or property without due process of law. And the elimination of a competitor by revoking his license is not a process of law, but only a manifestation of the evolution of tyranny. Because a license to practice medicine is liberty, and the exercise of this liberty or privilege becomes property. But testing the constitutionality of a law is not within the province of the average physician, because he has not the funds, and the tyrants usually prey upon this kind. They do not attempt to impose their authority upon the wealthy or powerful; no difference what kind of a physician he pretends to be (magnetic healer, chiropracter, or what not), but usually the more humble members of their own special sect. A medical friend, who was suffering persecution at the hands of these petty tyrants, writes me that he is past middle age; has been practicing his profession for thirty years, but excited the jealousy of a member of the State Board who resided in his vicinity in the city by being more successful than the board member in certain diseases. In this particular instance the disease was appendicitis. The persecuted party cured it by electricity, and other remedial agents. The tyrant asserted the only remedy was a surgical operation (larger fee), and the victim was promptly notified to appear before the board and show cause why his license should not be revoked. He finally, however, secured a permanent injunction against the tryants. You will see in the lay press and medical journals that the State Board of Health meets at a certain place to examine applicants to practice medicine and consider charges against certain physicians. In this way they pretend to the people that they are doing something, and keep the rank and file intimidated, because most physicians have courage enough to think a little on the sly, and may have at some time prescribed a remedy for the benefit of their

patient that had not been approved of by and of the councils who are the makers and compilers of all ethical (?) lists of therapeutic remedies, and, of course, if you consider the patient's good in preference to their wisdom, you may be their next victim. I am convinced that most physicians, and all conscientious ones, are guilty of this violation of the code, but they do not mention it when attending a society for the promotion and extension of the self-declared great ones. Even the headquarters of medical tyranny in America are shocked by having one of their members read a paper entitled "The Fetich of Disinfection," and when they hear from the people, and the rank and file of the profession, somebody will be compelled to work for a living, and another stride will have been taken in the evolution of tyranny.

[Written for the MEDICAL BRIEF.]

The Three Hypos Prefixed to the Great Thesis of Cosmogony.

BY J. C. DENSTEN, M. D.,
Scranton, Pa.

Among the various hypotheses of creation, not only of the cosmos or universe, as a whole, but pertaining more particularly to the earth and its biological factors; is the intent and purpose of this article.

Let us then begin with the creation of the earth, upon which we live and have our being. All knowledge gained upon any subject is centered about that subject, and is called science. We therefore term as "sciences" many obvious and abstruse subjects, whether occult, esoteric, or material, to which any line of reasoning or logic may hypothetically or otherwise be applied. All sciences are divided into the exact and inexact. Exact knowledge is absolute and demonstrable. Inexact knowledge is probable and approximate.

Many theories are advanced concerning the various phenomena of nature, and the knowledge gained upon scientific subjects, is, in most part, derived from observation, and absolutely so as pertaining to geology and astronomy.

These two sciences are the potential factors toward knowledge, as pertains to the creation of the earth, its component parts and its evolutionary state and stages, its proximity to the sun and surrounding planets, its suspension in ether, its magnetic force, and the laws governing gravitation, etc. This brings us to the "Theories," concerning the three (3) hypos of creation:

1. The hypothesis of eternity.
2. The hypothesis of creation.
3. The hypothesis of evolution.

The mind of man is the key to every solution. Theoretically, the mind of man is very productive of hypos and theses, which, clothed with logic and reason, become axioms, and so, step by step, every science is built upon a tower of truth, an exactness undeniable and convincingly true.

The minds of men vary. The reason and logic of one mind may be sophistical, while another may reason by axiomatic deduction or induction, yet both, seemingly, appear sound in reason and logic. The one will, from his sophistical premises, produce a reasonable and logical answer, viewed either—*a priori* or *a posteriori*—and be recognized as sophistry only by a mind able to reason and logicise axiomatically. The "hypothesis" of one is false, of the other true. In order to become a judge, one must be learned equally or superiorly to the one judged, else how can he be recognized as a competent critic?

It has been said, "that all men look upon the same world, but all men do not look upon the same world alike," and surely, this is true. The five senses vary in results, as minds vary in results. Blue to one optically appears green, while to another green may appear blue, and thus the senses are deceived and sophistical reasoning deduced. Sounds also vary, as do the feelings. One may look upon a sight with composure, while another may be filled with terror at the same spectacle. Because of such variations, physiologically, in man, so specialists have sprung up in every branch of trade, professionally, artistically, mechanically and scientifically. Therefore, we rely for a more exact knowledge on the "specialist" in his or her particular branch of trade, thought or business; and, as considering

the different hypotheses of creation, as in other departments of knowledge, let us seek the "specialist," in whose opinion and reasoning we have more confidence than in that of the public in general. The "specialists" to whom we are now to look, and on whom we are to depend, are those learned in and devoted to the subject before us, viz., the truth concerning the earth's creation, and all biological forms, both flora and fauna.

1. *The Hypothesis of Eternity.*—This belief has possessed, and still possesses, many minds as the true solution to the problem of creation. That all things existed eternally, there being no beginning, and with the same applied belief of the future—that it will always remain and be throughout future—eternity. All believers in this hypothesis also believe in a creator; a being, or power, capable of producing and maintaining all that appears in the universe, and the earth in particular. They recognize laws by which all things are controlled, but believe in special providences, affecting things material.

2. *The Hypothesis of Creation.*—And now we are treading upon sacred ground. All our present institutions, or, at least, the majority of them, universities of learning, churches, law, judiciary, civil and criminal, of equity and of trust, are all founded upon this—the hypothesis of creation. From this belief sprang the Old Testament, which for four thousand years has been held sacred and true. From this hypothesis Jesus of Nazareth, maintained to be the Son of God, and lived accordingly; hence, having the courage of His convictions, was crucified, then idolized, then deified, and for nineteen hundred years all other hypotheses have been overridden by this one great theory—the hypothesis of creation.

Those who believe in this hypothesis are in the majority; they believe that all things were created by the fiat of a Prerogative, and that power they call God. Many and varied are the concepts formed of this Creator. Many humanize Him, and picture Him fantastically, as sitting upon a material throne, over-ruling the affairs of the world; such "fantasms" are varied and great. They believe that this "Creator" has the power to make or destroy, to calm the waves of the tempest, or create something from nothing. They attribute catastrophies to His displeasure or wrath, and yet they call Him a God of love. They worship Him as an individual God, and expect personal favors. They fear Him, yet claim to love him. They worship Him one day in the week, in "spirit and in truth," and cheat their neighbors all that it is possible the other six. They believe literally in the wording of the Old and New Testaments, and die in ignorance of truths outside their Bible. They call all knowledge sophistry which does not accord literally with their word of God. They still believe that Joshua commanded the sun to stand still, giving proof that they have not passed beyond the theory of Ptolemy—the geocentric theory, believed centuries before Christ, but now exploded, since Copernicus gave to the world his heliocentric theory, for the advancement of which truth Bruno lost his life, and Galileo was imprisoned, persecuted and banished. They disdain to read "scientific works" by Laplace, Kant, Lamark, Wallace, Darwin, Spencer, Huxley, Tyndall, or Hæckel, fearing, perhaps, to be too strongly impressed by sound reasoning, and the axioms of nature, as compared to their belief of faith and fantasy.

3. *The Hypothesis of Evolution.*—By evolution, we mean the evolving out of itself, the unfolding from within a succession of things from a beginning; a greater from a lesser, as the rose from the bud, or a frog from the pollywog, or man from the ape, or the earth, as it is today, from a nebulous mass. The theory of evolution is a wide field for thought; in it are included geology, biology, meteorology, paleontology, astronomy, natural history, morphology, ontology, ethnology, and many other sciences, all of which harmonize and aid in proving the theory. In fact, there is no other theory so well proved and substantiated as the theory of evolution, concerning all material things.

Concerning the evolution of the earth, the nebulous theory holds positive evidence. New worlds are being formed from nebulæ thrown off from the sun, the residue of previous worlds. The telescope, astronomically applied, gives us positive knowledge of this fact, for it displays to

the sight worlds in different degrees of formation.

That this earth was once in a gaseous state is quite evident from "induction." That millions of years intervened between its beginning and the stage in its evolution which made it habitable, or the stage or condition made possible to produce and sustain animal and vegetable life. Then millions of years again to produce the present flora and fauna. But step by step have the scientific "specialists" in geology, biology, astronomy, meteorology, morphology, paleontology, and ethnology, studied and compared notes, and formulated facts in each department of science, until it was found and proved beyond doubt that each fact in the aggregate pointed with the same unerring certainty to the same result, the same answer, and that answer and result spelled the same word—e-v-o-l-u-t-i-o-n.

If, then, the theory of evolution be true, where shall we seek for "the beginning of life." What is life and how did it originate? That question has never been solved, has never been satisfactorily answered.

Evolutionists deal with cause and effect, with existing states, linking the past and present together by deduction and induction and comparisons. Missing links are often wanted to complete a chain of evidence, and in many cases these have, at last, been found, thereby completing the series.

But the theory of evolution is yet in its infancy. It is true that for several centuries a very few minds have dared to step aside from the orthodox principles and dogmas of their day and generation, and assert with boldness their belief in the hypothesis of evolution.

For centuries, in the Medieval ages and down to the nineteenth century, "religion" fought against "science," and prevented its advancement. Then came four men, born within a radius of twenty-five years, who gave their time and best thought to science; each going his own way, but, ultimately, converging into the same fountain-head of knowledge and conviction; men who did more for advancement of scientific knowledge and truth and facts than any others in the century just passed. I refer to Darwin, Huxley, Tyndall, and Spencer. One other deserves mention—that of Earnest Hæckel. They spake and worked, and their works shall live for knowledge, to make more wise the coming generations. They have touched the little grain of thought upon the mountain top of "evolution," and started it rolling down the mountain side, toward and through the valley of investigation. This little grain of thought will touch another, and they another, and these other and greater minds until the whole world will be rolling and crashing, intellectually, into the valley of science, of knowledge and of wisdom; sitting at the foot of the mountain of evolution, like Paul at the feet of Gamaliel, to learn more of its truths—more of the science of the theory of evolution.

What produced life? What is animation? Here lies a mystery still. What produced matter? What is inanimate substance? The solution to these questions also remains a mystery—we do not know. We can theorize and postulate, but the mystery remains, and our syllogisms are incomplete.

Evolutionists, proper, do not deal with these subjects, nor do they endeavor to solve this mystery. They take life as they find it, and the remains of life as it has been, and reasoning from cause to effect, and from effect to cause, determine accurately, past, present, and future conditions. From the known facts they theorize with a degree more or less of certainty, and every "thesis" shadowing of "theory" becomes hypothetical; hence, the theory of evolution is yet but an hypothesis.

It may be said, and creditably, too, of the leading specialists on evolution, that they have been honest in their researches, and have given to their contemporaries and successors as plain and logical an accumulation of facts as it were possible under existing circumstances. They have dealt more in facts than in postulates, and have given invaluable testimony, derived from observation, toil, study and investigation. Facts are given as facts, theories as theories, and, as to the origin of life, they remain agnostic; they leave the solution of that problem to the biologists and theologians, and will accept or reject their solution, according to reasonable and logical convictions and proofs, as the biolo-

gists and theologians have and do accept theirs.

The cellular theory of life accords with evolution. The protoplasmic formation of a single cell, then the proliferation and continuity; one a plant life (plasmodo mous, the other an animal life (plasmophagous). From these, single life-cells have been produced by evolutionary processes, aided by immeasurable time, up, up, up, through the different forms of plant and animal life to the present state and stages of flora and fauna.

On the animal side, from water animals, developed, in course of time, the amphibious, or those capable of living both on land and water; then land animals with lungs, as reptiles, and from these evolved birds and monkeys; then the gibbon, orang outang, chimpanzee, gorilla and man, and will it cease here? Not if evolution be the correct theory. There can be a great improvement yet on man, and I, for one, believe ages will yet produce a superior being to the present man, so high about the present man as man is now about the gibbon, or others of the ape family.

One fact is certain, that the chemical laws of production will continue, from combination of colors, to produce varied and variegated complexions in the human, as in all animal creation. The so-called white race is not white, it is ruddy (red), but in the coming generations of human production there will appear a generation white in color as chalk, just as in chemical nature it requires the united combination of all the colors to produce white, so the united combination of all colors and races of human beings in marriage will, eventually, produce to progeny, through heredity and, as a result of an atavistic law, a perfectly white race of human beings. That time is a great way yet in the future, but it is inevitable. There will also be produced in the future a hairless human being. There will yet appear a race of humans without hair on any part of the body, and that will occur when the physical has reached a distance sufficiently remote in the future to have perfected the now progressive evolutionary laws of physical changes, dating from the origin of man's existence, when his entire body was covered with hair.

It requires millions and millions of years for any very great noticeable change—epochs, composed of ages of time.

The biblical account of creation, as chronicled in the first book of the Pentateuch, infers that but six thousand years have elapsed since the creation of man. Paleontology proves that mankind has existed for millions of years.

The Hebrew account of creation was taken from the Babylonians, Chaldeans and Assyrians, and are, in most part, if not entirely, legendary, traditional and mythological. It is claimed by theologians and biblical commentators that Moses wrote the first five books of the Bible, known as the Pentateuch, but scientific and unprejudiced minds have, after careful investigation, proved conclusively that neither Moses nor Joshua wrote any part of the Bible, they having been dead at least three hundred years before these books were written.

Scientists tell us that some time in the future of the world, it will cease to revolve, either on its own axis, or around the sun, in its orbit; that, as it grows older, it becomes larger, by the accumulation of meteoric particles, and dead and decaying matter from its own vegetable and animal productions on its surface. That the earth, once being smaller, moved faster, and at one time but five hours being a day, and, gradually enlarging, it revolved slower until now twenty-four hours mark one revolution on its own axis. This slowness will continue, less and less; the slower it moves the less heat is generated, or, in other words, the earth gets colder, until in the coming ages it will become so cold as to exclude vegetable and animal life on its surface; then, later, will drop back into the sun, whence its particles and gases will again be thrown out into space, to become a nucleus, or nuclei, for a new world, or worlds, in accord with the nebulous theory of their formation. But, intermediate to final dissolution of the earth, there may yet appear several glacial periods. Scientists estimate that we are now advancing toward another glacial stage. Ten thousand five hundred years hence and the "glaciers" will have advanced

upon us, from the Arctic region, all our rivers and streams will become ice, and "glaciers" one thousand feet high will slowly encroach upon us, crushing our cities beneath their weight, and reducing to fineness all material things above ground. All animal and vegetable life in the region of its environment will die, and then in an eon of time, the extreme cold will again yield gradually to changes of temperature again sufficiently warm to sustain and reproduce both animal and vegetable life; "cycles" of time—like causes producing like effects in future, as in the past; history but repeating itself.

Materialism and Pantheism find virgin soil for prolific growth in the hypothesis of evolution, and surely the laws of nature construct, destroy and reconstruct. This has been going on from the foundation of the earth, and with each succeeding revolution around the sun there has been an increase in its size, a change of surface form, a change in magnetic force, an alteration in both flora and fauna, physically and otherwise. These changes have been slow and gradual, so slow that in many instances ages elapse before such changes are noticeable to the observation of man. But long epochs of time have produced changes convincingly undisputable. New genera and species have been produced, atmospheric conditions entirely reversed, and the physical earth entirely remodeled.

How are these changes brought about? Are they a special production from the hands of a creator, or are they the outcome, growth, and production of certain, and material, and natural laws? They must be produced either the one way or the other. Materialists and Pantheists see the creative power everywhere in nature, and recognize both the creative and destroying power in nature's laws; this power they may or may not call God. The Pantheists, as the name implies (Pan—all, and theos—God), sees God in everything, and believes He is omniscient, omnipotent, and omnipresent, but the concept of their God differs from the concept of the God of the Christian, in that it observes only law and order, while the Christian believes in his God as a specific God, with special providences, and an immortality. The Materialists believe in the laws of nature only, and hence are true evolutionists.

All the "isms," like the "pathies," are verging into one; they are dovetailing and uniting. Later, there will be but one school of theology, one school of medicine; these each will have swallowed up all others, and will contain the good, the true and the tried of all. There will be but one "ism," and that may be evolutionism; but one "pathy," and that may be electropathy, for electricity is light, heat, power and life. Evolution is reasonable, logical, rational and axiomatical, and corresponds with nature's ways of life and decay.

Greece Honors Doctor.

DR. ROSE, MEMBER OF MEDICAL SOCIETY OF ATHENS.

Dr. Achilles Rose, of No. 126 East Twenty-Ninth Street, has been elected the corresponding member of the Medical Society of Athens in recognition of his labors to reform the technical medical language of physicians. This society is one of the leading medical organizations of the world. In honoring Dr. Rose, the society said it considered him the first physician who had successfully reformed "the corrupt medical onomatology." All other reformers, according to the society, did not come up to the standard, as they showed a poor knowledge of the Greek language.

In speaking yesterday of reformed onomatology, Dr. Rose said the study of a language like the Greek should not confine itself to the investigation of either the ancient or the modern to the exclusion of the other. One complements the other, and both should be considered, he said, to make possible scientific knowledge of either.

"One would think that this was clear to everybody, and that especially the men of science would follow this rule in the course of the study of a language," said Dr. Rose. "Indeed, they do in the scientific investigation of all other languages than the Greek. In studying and teaching Greek our college professors are unscientific, and they have a conspiracy among themselves against scientific truth in regard to Greek. The philologists outside of Greece, who know only the writ-

ten tradition of Greek, call all words spoken in Greece to-day which they have not found in the old texts new Greek, and regard them as not belonging to ancient Greek, notwithstanding that in reality these words and phenomena are genuine, unadulterated, and often unchanged, oldest Greek.

"The importance of correct onomatology is that it furnishes the real instruments for the operation of the mind; it is important that these instruments should be of the best, and it is indeed working in the interest of science, for the progress of science, when we exert ourselves to improve our onomatology.

"Since the words preserve the ideas and transmit them, perfection in science is impossible without perfection in language. However true the facts may be, however correct the ideas developed by facts, only wrong impressions will be transmitted so long as the expressions by which they are communicated are not exact. I have heard it said that a reform in onomatology would cause inconvenience. This, of course, can not be considered from a scientific point of view.

"However, there need be no fear of inconvenience. Scientific onomatology will do away with much confusion and dispute which exist on account of improper terms.

"In many instances nomenclators of modern times have gone astray by creating unnecessary words, and by violating the laws of analogy and orthography. Irregularities in the formation of new medical terms have been permitted an extensive field because physicians of recent periods have more and more abandoned language study.

"While grammaticians have thus far done very little in presence of an existing animosity against scientific language in medicine, the innovators have carried their audacity to such a point that medical onomatology threatens to become before long entirely unintelligible. The Greek of to-day, as taught in the schools throughout Greece, the official language of the government of Greece, is pure Attic Greek, as pure as it ever was. It is the immortal Greek in all its youth and beauty, free from foreign elements.—*N. Y. Tribune.*

Examination Questions and Answers Missouri Medical Examining Board.

(Continued from page 488.)

MEDICAL JURISPRUDENCE.

Answered by Dr. Wesley E. Taylor.

1. What is tyrotoxicon, and in what is it found?

ANSWER.—A poisonous ptomaine, occurring in stale milk, cheese or ice cream.

2. What are ptomaines, and in what found?

ANSWER.—Alkaloidal poisons, the results of the putrefaction of animal matter.

3. What is insanity?

ANSWER.—A pathological condition of the mind in which it departs from that which is recognized as belonging to a normal person.

4. Give different forms of insanity.

ANSWER.—This is very difficult, because there are so many different classifications. One good one is: (a) Hereditary form, (b) insanity due to environment, age, sex, etc.; (c) insanity due to fatigue, (d) insanity due to infectious processes, (e) insanity due to toxins (as alcohol, cocaine, etc.), (f) traumatic insanity.

5. Give appearance of gunshot wound at entrance, and at exit.

ANSWER.—At entrance—small, depressed, smooth wound, with possible powder burns and clothing pressed into wound. At exit—larger, protruding, rough edged, free of clothing shreds.

THERAPEUTICS.

Answered by Dr. Wesley E. Taylor.

1. Give therapeutic action of aconite.

ANSWER.—A cardiac depressant, lowering blood pressure and temperature on account of dilatation of arterioles. Used in certain fevers.

2. Therapeutic action of belladonna.

ANSWER.—It is stimulant, analgesic, anhydrotic, mydriatic, and relaxes spasm and rigidity.

3. Therapeutic action of digitalis.

ANSWER.—Has a good diuretic action, diminishes dropsical conditions, and as a heart tonic stimulates inhibitory nerve fibres, slows heart action, but increases its force.

4. Therapeutic action of opium.

ANSWER.—It is a hypnotic, sedative, anodyne, antispasmodic and diaphoretic. Its action is best known as used for pain, or as a motor depressant in diarrheas, etc., and in peritonitis, vomiting, etc., etc.

5. Therapy of nux vomica.

ANSWER.—Tonic—to increase appetite; as a cardiac vaso-motor stimulant, and as a stimulant to respiration.

6. Therapy of veratrum.

ANSWER.—Reduces blood pressure, and acts as cardiac sedative, slows heart, and lowers blood pressure.

7. Therapy of mercury.

ANSWER.—An antisyphilitic and a sorbefacient; an alterative tonic, stimulating secretions; a purgative and an antiseptic.

8. Give medicinal treatment of measles.

ANSWER.—Isolate and give eliminatory and symptomatic treatment. A mild tonic is good.

9. Medical treatment of scarlatina.

ANSWER.—Quarantine; good ventilation; diuretic and eliminatory; gargles, if necessary; symptomatic, tepid to warm baths; oil skin during desquamation.

10. Medical treatment of diarrhea.

ANSWER.—(This question is rather vague). Remove cause, cleanse system of irritant, rest

in bed, diet, mild astringent; possibly, a mild opiate. Each case is a law unto itself.

HYGIENE.

Answered by Dr. Wesley E. Taylor.

1. What are necessary precautions and length of quarantine in (a) variola, (b) scarlatina, (c) diphtheria, (d) yellow fever?

ANSWER.—(a) Rigid quarantine, and continue seven days after scabs have fallen. (b) Quarantine until desquamation ceases, but keep well greased all the while. Bathe in tepid water and carbolized soap until all desquamation ceases. (c) Use antitoxin; isolate as long as throat is sore, some say as long as bacillus persists. Immunise all who have been exposed by antitoxin. (d) Protect from any mosquito bites, and keep thus isolated or protected until fever is all gone.

2. Give composition of milk. How sterilized. How peptonized. How modified. Why is it necessary to modify for infant feeding?

ANSWER.—Water, more or less, eighty-eight per cent; proteid, more or less, three per cent; sugar, four-fifths per cent; fat, three and one-half to four and one-half per cent; mineral, seven to ten per cent. (b) Bring to within a few degrees of boiling (if you do not wish to boil it), and repeat in three hours, after first cooling it down. Then cool again. (c) With liquor pancreaticus. Warm to 140° F.; let stand two or more hours; boil. (d) With lime water. (e) Curds are too large, and it contains too much proteid.

3. Give per cent of (a) oxygen, (b) nitrogen (in air). (c) What effect has burning lamp (or gas) on atmosphere? (d) Mention deleterious substances existing in sewer gas.

ANSWER.—(a) Twenty per cent by volume. (b) Eighty per cent by volume. (c) It consumes the oxygen and leaves carbon dioxide in its place. (d) Carbon monoxide, carbon dioxide, hydrogen sulphide, and others.

4. (a) How much water per day, in ounces, should be consumed by an average adult? (b) Mention most frequent pollution of water. (c) Give test for organic matter in same.

ANSWER.—(a) From thirty-two to forty-eight ounces. (b) Organic material from sewers, including typhoid germs. (c) Nessler's solution will give a brownish yellow tinge if minute quantity is present.

5. (a) Give general outline for disinfection and fumigation, (b) and comparative value of the following: (1) Formaldehyde, (2) sulphur, (3) chlorin.

ANSWER.—(a) If it be a room, fill all cracks and air connection with outside parts thoroughly with cotton. This includes chimney and the window joints, etc. From a formaldehyde generator fill the room through the keyhole with formaldehyde gas. Let stand twenty-four hours. Ventilate and scrub floor afterwards with one-twenty-thousandths corrosive sublimate. Clean well mechanically. (b) (1) Best and most practical, (2) good, if well used, but ordinarily too sparingly used, (3) chlorine is too dangerous, and too destructive. Is deadly, but disinfects.

SURGERY.

Answered by Dr. Frank K. Boland.

1. Give in detail the treatment of a recent open fracture of the tibia.

ANSWER.—Ascepticize thoroughly, and apply light dressing. Effect reduction by extension and counter-extension. Apply plaster cast from toes to middle of thigh, with fragments in apposition, and foot in straight line with leg. Cut window over the wound, surround window with rim of rubber tissue to protect cast, dress as often as necessary to keep clean. Keep patient in bed until wound is healed, after which he may get about on crutches. In five or six weeks cast is removed, and patient may put foot lightly to floor.

2. What are the symptoms of a subglenoid dislocation of the humerus?

ANSWER.—Pain, flattening of the shoulder, loss of prominence of the deltoid, elbow is away from trunk and backward, considerable lengthening of extremity, head of bone felt in axilla, rigidity of joint, and Dugas' sign (elbow can not touch side with hand on sound shounder). Reduction: Flexion of forearm, external rotation, lifting elbow forward, internal rotation, and lowering elbow. Dangers: Fracturing bone, injuring brachial plexus or axillary vessels.

3. Given a wound of the scalp, what investigation of the wound is necessary?

ANSWER.—Examine carefully for fractured skull, which may be complete or only through one table. Shave wide area. Use every aseptic precaution. Stop all bleeding. Suture lightly with silk-worm gut, draining, if necessary. Apply moist dressing.

4. What are the symptoms and what is the treatment of a gunshot wound in the kidney?

ANSWER.—Shock, and perhaps general symptoms of hemorrhage, which may prove fatal. Severe pain in loin, shooting into testicle. Tumor may form from hemorrhage or urine. Frequent and painful micturition or retention. Hematuria, unless urine leaks into peritoneum or surrounding tissues. Treatment: If wound is extraperitoneal, enlarge to permit drainage, arrest hemorrhage, ascepticize, and drain. Nephrectomy may be necessary. In intraperitoneal wound, perform laparotomy at once, and usually remove kidney.

5. Give and explain the symptoms of a strangulated inguinal hernia?

ANSWER.—Colicky pains and pains in the hernia, which is tender, without impulse on coughing, and irreducible. No gas or feces can pass, unless lumen of gut is not entirely constricted, or hernia is omental. Severe vomiting, which at first is reflex, and later is due to reversed peristalsis, and may become stercoraceous. Prostration, slight elevation of temperature, which, later, becomes subnormal. Pulse, small, irregular, fast; extremities cold; facial expression anxious. All symptoms augment until collapse occurs, or gangrene causes their temporary lull.

6. How would you differentiate between a fracture at the neck of the femur, without impaction, and a dislocation? Give Bryant's and Nelaton's lines for making the measurements.

ANSWER.—In fracture, limb is usually everted, and lies straight in the bed; in dislocation, the limb is adducted, rotated inward, and more or less flexed. In fracture, one may get crepitus, preternatural mobility is present, and passive movements in any direction are possible; in dislocation there is no crepitus, and extension, abduction, and outward rotation are impossible. In both cases the top of the great trochanter lies above Nelaton's line, a line drawn from the anterior superior spine of the ilium to the tuberosity of the ischium. Bryant's line: The distance between lines drawn through the two anterior superior spines, and the summits of the great trochanters is less on the affected side in both cases.

7. Detail the clinical symptoms and the surgical treatment of an empyema.

ANSWER.—Symptoms: Empyema usually follows some other disease or a serous pleurisy. There may be but little pain, cough and dyspnea, unless side is very full. Symptoms of septic infection are present, sweats and irregular fever. Physical signs of serous pleurisy are present; intercostal spaces are obliterated, there is a bulging, and on the right side the heart may be displaced; tactile fremitus abolished, dullness on percussion, and voice sounds lost. Aspiration proves nature of fluid. Surgical treatment: Remove inch or two of one or more ribs in axillary line, usually sixth or seventh, open pleura, and drain with rubber tube. Do not irrigate.

8. What are the clinical symptoms, and what is the surgical treatment of a purulent effusion into the knee joint?

ANSWER.—Symptoms: Swelling, redness, pain, loss of motion, and general symptoms of pus, usually; chill, sweats, elevation of pulse, and temperature, prostration. Treatment: Open and drain.

9. Describe the different avenues through which the urinary bladder, in the male, may be emptied surgically.

ANSWER.—(a) By suprapubic aspiration. (b) Suprapubic cystotomy. Incision just above pubes, avoiding peritoneum. (c) Perineal section, cutting through the median line down on sound as guide.

10. Give the differential diagnosis between an aneurism of the popliteal artery, and an abscess in the popliteal space.

ANSWER.—Pulsation of aneurism, expansion of abscess up and down. Pressure on artery above aneurism diminishes its size, below increases it; no effect on abscess. Bruit is heard in aneurism; abscess is red, and more tender to touch. History is important. Aneurism is of longer duration.

BACTERIOLOGY.

Answered by Dr. E. C. Thrash, Professor of Bacteriology, Pathology, etc., in the Atlanta School of Medicine.

1. (a) What is infection? (b) What is immunity? (c) Through what agencies may the body protect itself from consequences of infection?

ANSWER.—(a) Infection is an invasion into the tissues of pathogenic bacteria. (b) Immunity is that condition, either acquired or natural, in which the tissues are in a state to resist a specific form of bacterial invasion. (c) By Erlich's lateral chain method, by the opsonic method, by sudden changes taking place in the blood plasma, through which change phagocytosis is increased, and by the generation of antitoxins.

2. (a) Name the common pyogenic microorganisms, and describe (b) the microscopic appearance, and the behavior of the staphylococcus pyogenes aureus in osteomyelitis.

ANSWER.—(a) Staphylococcus pyogenes albus, aureus and citreus, streptococcus pyogenes, diplococcus intracellularis meningitides, and gonococcus. (b) Staphylococcus pyogenes aureus is a small, spherical-shaped organism, occurring singly, in pairs, or in clusters. They stain readily with methylene blue. In osteomyelitis they produce a primary infection, and enter the bone structures through the circulatory system, gaining entrance at some remote point, and after being deposited in these structures they set up an acute, purulent inflammation that results in a necrosis of the bone and surrounding tissues, which inflammation ultimately becomes chronic.

3. (a) What is meant by an antitoxin? (b) What is serum therapy? (c) Illustrate by two diseased conditions in which it is successfully employed.

ANSWER.—(a) An antitoxin is a substance that neutralizes toxine. (b) Serum therapy is the production of an excess of antitoxine in an animal's blood by inoculating the animal with toxin until it becomes tolerant to the poison. This antitoxine-laden serum is extracted from the blood of this animal and used as a therapeutic agent in the prevention and cure of disease. (c) Tetanus, diphtheria.

4. Describe in detail Widal's test in typhoid fever, and explain the principle on which it is based.

ANSWER.—A drop of blood is obtained from the patient suspected of having typhoid fever by puncturing the finger or lobe of the ear. This drop is collected upon a slide, another slide is laid over the drop, but not allowed to touch it, separating the two slides by a piece of match or toothpick. Allow to dry. Mix enough of this dry blood with sterile water, or bouillon, to produce a dark amber color. Then mix a small quantity of this solution with a twenty-four-hour growth of bouillon culture of typhoid bacilli grown in an incubator. Examine this by the hanging drop method. If reaction is positive, bacilli clump and become nonmotile. If negative, they continue motile, and there is no clumping. (b) It is based upon the principle that certain antitoxines are produced in the blood, which, when brought into contact with typhoid bacilli, weaken, paralyze, or kill them.

5. Give (a) the characters of the tetanus bacillus. (b) How does it induce its effects? (c) On what theory is tetanus antitoxin administered?

ANSWER.—(a) It is a slender, motile, club ended, anerobic, spore bearing, pathogenic, bacillus. (b) By producing toxines which poison the nerve centers. (c) That it will neutralize the toxines.—*State Board Journal of America.*

Texas Medical Law.

The Board of Homeopathic Medical Examiners of Texas will hold its last meeting at Fort Worth, Texas, July 4-5, 1907, to act on applications for license to practice in Texas. The law will change July 11, 1907. Applicants on State Board certificates from the more advanced States are entitled (Section 8, Paragraph 4, of present Texas law) to register without examination. This board has special arrangements for reciprocity with Missouri, Indiana, Iowa, Georgia, Virginia, and some others. Section 6 of the law forbids discrimination on account of school of practice.

Non-graduates may apply for license by actual examination. Board prefers not to examine those who have had less than two years in medical college, and none who have been examined and rejected by any Texas board since July 4, 1906, need apply to this board. All applications should be in by July 1.

H. B. STILES, M. D., *Secretary*,
Waco, Texas.

THE MEDICAL BRIEF

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Editorial.

Are You Mentally Free?

Independence Day has again brought proud recollections of the glorious victories that brought liberty to our country. In the midst of all this boasting of our freedom, let us stop a moment to consider whether we are not still slaves to Mrs. Grundy—whether we are not held down by countless usages and precedents whose only recommendation is great age. How about our everyday life? Is it not burdened with many objectionable customs that could be easily abolished if we had the initiative? We tolerate unsightly and uncomfortable articles of wearing apparel simply because they are the fashion. The average man is perfectly content to accept a religion with a ready-made creed that he takes for granted is the whole truth; even though he may be unable to logically state his own belief, he is quick to condemn any faith with a different name from his own. The same is true of politics. The typical voter takes great pride in being "regular," and utterly ignores such trifles as the character of the candidate and the issues involved. To his narrow vision the acts of his own party are always above reproach, but he wears a pair of blue glasses when looking at what the opposition does. It is so easy to accept what is conventional as being just right, that errors and abuses seldom raise a word of protest. Any man will resent a sharp and unexpected personal wrong because of his animal selfishness, but our sense of justice has been so dulled that we are no longer concerned about the greater crimes that affect the community as a whole. Even though an injury only involves a neighbor at the moment, it is pretty sure to get around to ourselves in the end. The average man has come to wait the word of some self-appointed leader instead of thinking for himself, and coming to his own conclusions. When he does take time to

think, instead of showing originality his thoughts follow the same old ruts. It is ignorance and the habit of letting some one else do our own thinking that makes it possible for politicians in all the activities of life to gratify their ambitions by "working" the people. Is it too much to suggest that we investigate for ourselves before accepting as facts the statements of self-heralded authorities? What has been labeled "science," for instance, has often proved in after years to be only the false theory of a crank. Of course, it takes an effort to break away from intellectual slavery in the rush of present-day life, but surely freedom of thought is worth the price.

Danger in Substitutes.

A druggist in the *Pharmaceutical Era*, May 30, writes:

A physician who condemns secret remedies and criticises the sale and use of patent medicines can not claim to be consistent when he overlooks preparations the constituents of which he is perfectly familiar with, and prescribes the secret preparations of some manufacturing firm.

What this druggist is seeking, is to induce physicians to prescribe his and other druggists' imitations, made, presumably, after the formulæ laid down in that book of substitutes, the National Formulary, in place of the genuine proprietary preparations. In other words, when a physician has found out from his own experience, or has been convinced from the recorded experiences of other physicians, that a certain preparation is a useful and reliable remedy in certain conditions, he is not to prescribe this preparation of known value, but is to order an imitation of the same, made by the druggist. And he is urged to do this on the ground that the proprietary is a secret remedy, and the substitute is not. Now, there is little or no secrecy about the generally accepted proprietaries, the manufacturers, as a rule, telling practically all about their respective products which it is necessary to know in order to determine their therapeutic efficacy; and so, the argument as to secrecy can have no weight with the well-informed physician. But can he be so certain of the contents of a preparation made from a prescription, which may fall into some incompetent or dishonest druggist's hands to fill? Few doctors are willing to take the chance of making enemies of druggists by specifying the particular apothecary to which his prescriptions shall be carried, and so he can not tell whether the one who fills it is competent and honest, or not. And so, it seems to us, that he would prefer to order the original proprietary which is always uniform, and whose manufacturer must keep it up to the standard, instead of the imitation of uncertain composition and which has no reputation behind it. Perhaps the druggists can not be blamed for trying to get the doctors to prescribe their substitutes, for, probably, it means a few cents more in their pockets; but the doctor of common sense, who has regard for his own interests and for those of his patients, will be apt to see that he is not in business to help the druggist to increase his profits, and, hence, will go on prescribing the products whose worth has been proven, and upon which he can always depend for certainty of result and uniformity of action.

Substitution.

Readers are justified in suspecting the honesty of dealers that practise "substitution," or the gentle art of persuading a customer that he does not know what he wants, and that he ought to get an inferior article in order to give the dealer a bigger profit.

Substitution is objectionable from many points of view. When you ask for one thing, and the dealer tries to make you take another, he proves in the first place that he thinks you to be something of an idiot. If he thought you knew your own mind he would not try to make you take something that he manufactures, and that has no reputation, in place of the recognized first-class article that you ask for.

Everybody knows that an imitation, made of inferior ingredients, can be sold more cheaply than the real article which is bound to keep up its reputation, and which can not afford to risk a trade on which millions have been spent in promotion and manufacturing.

The use of bad alcohol in an external remedy, for instance, may cause a skin disease instead of curing it, whereas the real remedy, decently and honestly made, is of great value. The writer is acquainted with one retail merchant whose clerks always endeavor to sell to customers the imitation of a certain article. The owner of the store uses that article in his home every day and does not take any imitation. He knows better than anybody what the "just as good article" is made of.—*N. Y. Journal*, June 4, 1907.

The National Formulary Substitutes.

The druggists of Philadelphia have a custom of holding what they call "Pharmaceutical meetings." They gather at the Philadelphia College of Pharmacy, periodically, to discuss the various questions that arise in their business. At one of these meetings, held May 14, Mr. Ambrose Hunsberger read a paper on "Practical Results with National Formulary Preparations." He exhibited upwards of twenty of these substitutes, and cited some of the difficulties he had encountered in trying to make the same, and to get the physicians in his neighborhood to specify or to permit him to use them in place of the proprietaries they are intended to supplant.

Mr. D. J. Thomas, in discussing this paper, was inclined to question the advisability of pursuing this line of work, thinking *the rank and file of pharmacists are not prepared to meet the demand for making the U. S. P. and N. F. preparations.* He recounted some of the experiences that had come to his attention, which indicated that *pharmacists were generally not skillful enough to do this kind of work, and, in fact, that they have not, as a rule, kept themselves posted on the progress of pharmacy along the more practical lines.* He called attention to several of these formulas, that, when followed, *did not give satisfactory preparations.*

Mr. Lemberger told of his experience with cataplasm of kaolin, in which the *official article did not compare with the proprietary it was intended to imitate.*

Now, here is an instructive lesson to the doctors of this country, who really want to bring their patients to health, and who are not willing to be as "tenderly led by the nose, as asses are," by men, who, though occupying high official position in the profession, are yet no more truly solicitous for the welfare of the individual doctors than are the politicians interested in the public weal who so loudly proclaim their philanthropic and altruistic purposes. These druggists, in the privacy of their meetings, acknowledge what the BRIEF has a thousand times asserted, *that it is not possible for any man to analyze an organic mixture, and from such analysis to find out its ingredients, the exact quantities of each, and how these can be put together to duplicate the original product.*

The druggists of Philadelphia, and especially those who have received their training from that excellent institution, the Philadelphia College of Pharmacy, are the most skillful in the world. But here *they confess that the N. F. or U. S. P. formulas are untrustworthy, and that, therefore, it is impossible for them to be used to reproduce the standard proprietaries.* More than this, they make manifest, what is, however, a fact of common knowledge, that, even if the exact formulas and processes of manufacture of these proprietaries were given, that *the average pharmacist has not the requisite pharmaceutical skill to compound them in a satisfactory manner.*

These propositions are so elementary, they are so self-evident, that it is a cause for wonder that the movement for the substitution of the so-called N. F. preparation for medicines whose therapeutic values have been tested in thousands of cases, and whose effects are almost as definitely known as those of the standard drugs, can find either advocates or dupes.

The doctor who values his own reputation, who holds as sacred the trust his patients impose in him, is not going to be led astray by any pharmaceutical *ignis fatuus.* Nor will he be frightened by the bugaboo of ethics, which the politicians in his associations, for their own advancement and glory, are constantly setting in his pathway. No! He realizes that when a man devotes all his time to one or two preparations, that he is bound to develop a specialty in their manufac-

ture, and that even when he discloses his processes in full, that the little corner druggist, even if he is particularly desirous of doing so, has not the skill to reproduce these preparations. He realizes, also, that the manufacturer's reputation is at stake; that his business prosperity is dependent on his using the best of drugs in his preparations, and of maintaining a uniform standard of excellence for his products. And that, therefore, admitting he is not influenced by any higher consideration, the proprietor's own self-interest will compel him to supply preparations that are honest and reliable, and which, in every way, come up to the claims he makes for them. Doctor! "heed not the voice of the charmer, charm he ever so wisely." Do not use proprietaries because they *are* proprietaries, but use them or anything else that promises to secure the end you have in view—the restoration of your suffering patients to health. This is nothing more than practical, everyday common sense, and we do not believe any considerable number of intelligent, self-reliant physicians are going to risk their reputations and their patients' lives by using substitute preparations, whether made by his neighboring druggist or by the large pharmaceutical houses.

The Man of Independent Mind.

The late Senator John T. Morgan, of Alabama, was one of the few really broad-gauged statesmen of the present generation. He was, besides, a man of such integrity of character that not even envy, hate or party passion has ever imputed to him a dishonorable act or motive. But that which most distinguished him—the quality, above all others, that made him stand out conspicuous among his fellows—was *his independence* of mind. Though a Democrat of the straightest sect, he declined to attend the party's caucuses and steadfastly refused to be bound by their action. He did not *belong* to the party in the sense of subserviency to it, as the ordinary politician does. He considered, rather, that the party, in a measure, *belonged to him*—that it was but an instrument for carrying out his ideas of what constituted sound governmental principles and policies. If the leaders in the organization subordinated these principles to selfish ends or party expediency, he did not feel bound to follow them. He remained true to his own principles, regardless of what the organization might do.

It is, we think, unfortunate that there are not more men of his kind, not only in governmental employ but in every walk of life. Particularly, are such men needed in the medical profession at the present time, when there is a growing tendency for a few, who, though not especially skilled in the art of healing, yet, having the instinct of leadership, are trying to dominate the entire profession, to mould all doctors after their model, and to compel all to follow them into whatever devious paths they may drift, regardless of the fact that these would-be leaders have forgotten, in their desire to "boss," the only reason for the physician's existence, and that is to relieve suffering, to cure disease, to save lives. The independent physician cares nothing for organizations of any kind. They can not aid, and may hinder him, in the performance of his duty to himself and the public; and so he refuses to take his opinions and to mould his conduct at the behests of a few self-constituted physicians who are at the head of the associations, and who have mainly their own advancement and glory at heart.

Spring Medicines.

How often we hear the remark, "Doctor, do you not think I should take a spring medicine?" It is a fallacy, of course, to think that we need anything special in the spring, because the seasons have so changed that we can not tell when spring comes. Our calendar tells you the date, but when we consider that we have all the seasons in one week now, even to freezing weather, and the early vegetation all blighted, it sets us to thinking. The conscientious doctor will give remedies as per the indications, not according to the seasons. Perhaps this change of conditions is only temporary, but it may continue indefinitely, and put all the wiseacres to the test as to what is the cause.

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J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
NINTH AND OLIVE STREETS,
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FOREIGN OFFICE:
AUCKLAND HOUSE, BASINGHALL AVE., LONDON, E.C., ENG.

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[Written for the MEDICAL BRIEF.]

Pyorrhea Alveolaris and Oral Sepsis.

BY FREDERICK NORMAN, F. R. C. S., ENG.,
Surgeon to the Camberwell Dispensary.
London, England.

For some time past I have devoted attention to the subject of pyorrhea alveolaris, not so much for its own sake as from the circumstances that it is one of the factors in the production of oral sepsis, in which I am especially interested.

The condition known as pyorrhea alveolaris, or spongy gums, is also called Rigg's disease, and there is undoubtedly some mystery about this nomenclature, for I am not aware that any one of that name ever published any paper or article on the subject; at all events I can find no trace of it. I, of course, may be speaking in error, and I must admit that I have not access to every medical journal published in the United States. There seems to be but little doubt that the affection was named after Dr. J. M. Rigg, of Hartford, Conn. By some authorities it is stated that he was the first to describe the rational treatment of the disease. There is also a rumor that in 1867 he gave a demonstration, before the Connecticut Valley Dental Association, of certain instruments for removing salivary deposits from the teeth, and that the audience was so profoundly impressed by his ingenuity that they, as an especial mark of honor, conferred on him the paternity of this disease. But on this point I admit my ignorance, and I have no doubt that amongst the numerous readers of the MEDICAL BRIEF there are many fully conversant with the facts who are in a position to correct any mistake into which I may have fallen

I have no intention of describing all the varieties of this interesting disease, but speaking generally there is not only a spongy condition of the gums, but they recede, exposing a portion of the fangs of the teeth, which, no longer implanted firmly in their sockets, are loosened, and not uncommonly drop out. The inflammation involves the peridental membrane or periosteum of the fang, with the result that pockets of pus are formed, which extend along the roots, and result in destruction of the tissues of the gum and alveolus. It is said that this condition is due to the deposit of tartar from the saliva, but this explanation seems inadequate, and the disease is probably due to some specific organism, although as yet it has not been isolated.

The difficulty arises from the presence of many varieties of micro-organisms in the mouth. Most physicians regard it as a purely dental affection, and hand it over to their dental colleagues, who, however, usually receive it with no great en-

thusiasm. I cannot help thinking that it is something more than a purely local disease, for its persistence is attended with far-reaching effects.

Newland-Pedley, in his well known paper in the *Transactions of the Odontological Society*, describes the advanced stage of alveolar destruction in the following words: "The mucous membrane, especially that adjacent to the teeth, appears deeply congested and filled with venous blood, tumid and thickened, but not filling up the interstices of the teeth at their necks, and detached for some distance from the surface from the fangs. A thick fetid discharge may often be pressed up from between the teeth and the mucous membrane, which gives to the breath a very repulsive odor. This condition of things continuing, the alveolus becomes absorbed, whilst the fangs of the teeth become coated with a layer of thin, hard, greenish-brown tartar; ultimately, the disease progressing, the teeth one by one drop out. The alveolar margin is sometimes thickened in substance. The pain varies; it may be neuralgic from the first, but is not generally considerable until the periosteum is involved."

It has long been my conviction that the mouth is the hot-bed of many pathogenic organisms which perform a by no means unimportant rôle in the production of certain general disease of hitherto unexplained origin, but the source of which can be traced to the oral cavity. These pathogenic mouth bacteria are so numerous and so diverse in character that it is impossible to identify them by a simple microscopic examination of the saliva. Cultures on agar-agar are not satisfactory, for many of them will not grow on this medium, or are of such feeble vitality that they are soon ousted by the more proliferous saprophytes of the mouth. Gelatin is equally futile for the purposes of diagnosis, and inoculation into mice is the only reliable criterion. It is many years since Pasteur discovered in the human saliva a pathogenic micro-organism in the form of the figure 8, and since then Miller of Berlin, Fränkel, Gaglio, and di Mattei, Banti, Foâ, and many others, have furnished contributions dealing with the toxic properties of the saliva.

When a few drops of salivary secretion are injected into the abdominal cavity of a mouse, death ensues in a few hours, or it may be in a few days, from acute peritonitis or blood poisoning or both. Injections with the blood or peritoneal exudations of these animals produce the same results as injections with the original saliva. Of salivary organisms cultivated on artificial media, more than a score have been isolated and identified. Amongst the most important are Fränkel's diplococcus of pneumonia (possibly identical with the organism originally described by Pasteur), the micrococcus pneumoniæ of Friedländer, and the bacillus bucallis muciferens and various varieties of bacilli sputum—septicemia. In addition to actinomyces and saccharomyes albicans (thrush fungus), the bacillus tussi convulsivæ and the bacillus bronchitidis putridæ are not infrequently detected.

Goadby, of the National Dental Hospital, London, has recently published some excellent work on the subject, and the bacteriological methods he employed were as follows: Cover-slip films were made in some cases from the gum margin, and in others from the interdental spaces and pockets after irrigation with boiled water. Antiseptics were discontinued, owing to their inhibitive effect upon the cultures. The films made were stained by one of the aniline dyes; in the first portion of the work generally aniline gentian violet, but latterly Leishman's modification of Romanowsky was found to give better results. Agar streaks were made at the same time, plated by the smear method, and the colonies picked off at the end of from two to five days, and examined by the usual methods. In a number of the cases, films were also stained by Ziehl-Neelson, and by Gram's method. During the earlier part of the work, only a few of the isolated organisms were tested on ordinary media, namely, those that appeared to occur with the greatest regularity. Very little evidence was obtained of any one organism occurring with sufficient regularity to suggest its casual relationship with the disease under investigation.

In order to control the bacteriological finding as far as possible, the bacteria occurring in other conditions of the

mouth were also investigated—namely, gingivitis, ulcerative stomatitis, simple ulceration of the gums, the gums in scarlet fever and normal gums. The chief fact brought out is that a very much larger variety of species is found in the gums in ulcerative conditions, and that the bacteria found on the cover-slips directly in gingivitis and ulcerative stomatitis show a very curious similarity to those found in pyorrhea. The number of cases in which spirochætæ, spirilla, and comma-shaped bacilli were found is of interest. In most diseased conditions of the mouth, spirilla and spirochætæ appear in large quantities. They, however, as rapidly disappear upon the use of local remedies, notwithstanding the fact that the disease itself does not.

In a subsequent series of experiments the results were checked by observations on the opsonic index, and these yielded fairly satisfactory results. Inoculation experiments were also resorted to, and various animals were inoculated with pus obtained from cases of alveolar pyorrhea. Some of them died, but many recovered, some exhibited local lesions, others general infection, but without giving any regular or uniform results. This is in accordance with the observations of previous observers.

Respecting the etiology of the diseases we know curiously little. It frequently occurs in the course of chronic dysentery, influenza, and enteric fever, and has been met with in diabetes mellitus. In some cases I have traced it with approximate certainty to the use of impure or infected milk. It certainly occurs frequently in those who wear ill-fitting dentures. Some of the worst cases I have seen have been in men who are inveterate smokers, the teeth being so loose as to be useless for the purpose of mastication. It is rare in children, but I have met with it in connection with cancrum oris.

Its effects are far reaching, and the constant drain of septic material into the stomach must prove prejudicial to health. I have known it produce anemia, and in many of my cases the erythrocytes have been down to three million five hundred thousand per C. M. M., with a hemoglobin value of from sixty to seventy per cent. I can not confirm Hunter's observation that it may produce pernicious anemia, but the suggestion seems not unlikely. I have certainly known it responsible for a persistent chronic diarrhea. Murrell states that he has traced a certain form of arthritis to this cause, and his observations have been confirmed by other writers. For example, Prof. Howard Marsh has pointed out the connection of septic conditions of the gums with certain articular affections, especially rheumatoid arthritis.

He says: "The part played by the tonsils in the lymphatic tissues of the pharynx in harboring agents by which the joints may be infected has only recently been fully appreciated."

The primary septic focus may be in connection with a necrosed tooth. He mentions two cases in which after carious teeth were cut down level with the gum, and a new crown was applied, the patient became subject to an acute osteo-arthritis involving several of the larger joints, and those also of the hands. The fangs were removed, and pus was found in the sockets. In both these cases the joint affection was arrested. In the case of a lad who was anemic, and had enlargement and stiffness of the finger joints, and swelling and stiffness of both ankles and one elbow, the site of the infective focus was indicated by the discharge of a small quantity of pus which had been going on intermittently from a pin-hole opening in the gum opposite the bicuspid teeth of the lower jaw. Here, again, operative treatment proved successful, and the patient was completely restored to health.

The treatment of the disease is, to a great extent, surgical, but the whole subject must be regarded from a more extended point of view, and as a phase or manifestation of oral sepsis.

The necessity for the adoption of antiseptic methods in all surgical operations is fully admitted, and is scrupulously enforced in every region of the body with the solitary exception of the mouth and throat. No one seems to think of antiseptics in connection with tonsillotomy and uvulotomy, and that in spite of the fact, as has been shown, that the mouth is a receptacle for germs of all kinds, some benign, and some pathogenic. It is true that in operations for the removal of

the tongue for cancer, antiseptic precautions are observed, possibly from the fear of septic pneumonia, and it is safe to say that the mortality from this complication decreases in direct proportion to the strictness with which these measures are carried out. In these cases, the patient is put through a preliminary course of dental treatment, all necrosed stumps being extracted, and all decayed teeth carefully stopped. But still the main proposition stands, and in the majority of operations in the region of the mouth and throat equal care is not observed. This carelessness is not readily capable of explanation, unless on the grounds that the methods by which oral sepsis can be insured are not fully appreciated. The demand for the adoption by dental surgeons of the antiseptic measures observed in general surgery is becoming imperative..

The point we have to consider is (1) what steps can be taken to prevent the growth of bacilli, pathogenic and non-pathogenic, in the mouth, and to limit, as far as possible, the action of micro-organisms on the teeth and other organs of the mouth, and (2) to keep in check those far more serious diseases which so frequently result from want of attention to the mouth. There are many diseases of the mouth which readily take on a septic character, and although the list of mouth-washes and gargles is comprehensive, there are none free from serious disadvantages. Carbolic acid and members of the phenol group are not only toxic in action, but exert a deleterious effect on the mucous membrane of the mouth, producing in the epithelium a carnification which is undoubtedly a step on the road to the pre-cancerous stage. It is important to avoid injuring in any way the protoplasmic cells, which by their function and activity resist the onset of malignant disease.

As I have pointed out in previous communications on this subject, it has been my practice for some years to instruct the patient to paint the gums daily with a mixture of equal parts of tincture of aconite and tincture of iodine. For occasional use I employ equal parts of the tincture of iodine and the liquor iodi fortis, but this must be used with caution. I have also used menthol with advantage, and tablets containing menthol, cocaine and rhatany. Formic aldehyde is probably the best antiseptic for local use, and the chemical combination of formic aldehyde and menthol known as Formamint, has proved satisfactory in my hands. The point to remember is that whatever application is used, it must be kept up without intermission for weeks or even months. Lozenges have many advantages over mouth washes, for they can be slowly sucked, both day and night.

Although I am a strong advocate for what may be called local antiseptic measures, in these cases it is not to the exclusion of purely surgical treatment. All I urge is that an effort should be made to restore the gums and their adjacent tissues to a normal and healthy condition before resorting to more drastic measures. I am in favor of early extraction when the teeth are loose in their sockets, although I admit that loss of teeth means an artificial set, which may not always be comfortable, and are at the best difficult to keep clean. They afford a lurking place for micro-organism of all kinds, and are opposed to all principles of oral asepsis. I advocate conservative measures, as a general rule, but if surgical skill must be resorted to, let it be thorough and sweeping. I am, in the main, in accord with the general principles of treatment advocated by Goadby, who says:

"Local applications, curetting, electrolysis, and many other methods have been recommended for treating the local disease, all of them being directed towards removal of local agglomerations of bacteria calculus and débris, and the enjoinment of constant care on the part of the patient after such treatment has often cut short the disease in the earlier, and much ameliorated it even in the later stages, but as long as lowered resistance to the infective organisms remains, so does the disease progress. These facts and the consideration of the bacteriology of the disease, point to the urgent want of some method by which the general as well as the local infection may be attacked. It is impossible where any marked erosion or solution of the alveolar process has taken place to cause regeneration of the bony crypts of the teeth, or a re-estab-

lishment of the periosteum upon the denuded fangs.

Where a considerable amount of bone infection has occurred, but without the loss of the thin margins of the sockets, and where the peridental membrane is still intact, more may be done. In the first place it is useless to endeavor to preserve the gum and other tissues above the level of the bottom of the pocket, for if the pocket be allowed to remain, it only becomes the site of fresh infection, and the recommencement of the disease in tissues already weakened by the diseased process. On broad general lines, the alveolar pockets should be eradicated, a process that is best performed by means of the electro-cautery, only a few, at the most three, teeth being treated at a single sitting. The removal of deposits of calculus around the necks of the teeth should also be performed in the usual manner.

I have observed that thorough curetting of even two or three sockets of affected teeth is generally attended by an increase of the constitutional symptoms already present. Delayed healing, especially in the case of the wounds caused by the cautery, is common, and is frequently seen where multiple extraction is performed in cases of general pyorrhea, and I think it is inadvisable to remove more than two or three of the teeth at a single sitting or undertake extensive cauterization without previously raising the general resistance of the patient to the infecting organisms."

In a paper read before the Royal Medical-Chirurgical Society, of London, in 1900, Mr. Rickman J. Godley advocated the plan of, after removing the tartar, syringing the pockets methodically with peroxide of hydrogen, at first twenty volumes, and then ten volumes. Other applications which have been recommended are sulphate of iron, sulphate of copper, and other astringents on small swabs of wool pushed down into the pockets. I can not say that these methods have yielded any very startlingly good results in my hands. The plan I usually adopt is as follows:

1. In quite early cases, as soon, that is, as the edge of the gums assumes a purple color, and is receding from the fang of the tooth, whilst a gummy exudation can be squeezed from beneath, I find that thorough applications of astringents and antiseptics usually suffice.

2. In moderately severe cases, where the disease has spread as far as the apex of the fang, the implicated tooth or teeth should be removed, so as to expose the loculi containing septic matter. Peroxide of hydrogen is then applied, both to deodorize and disinfect, a strip of antiseptic gauze being used as a dressing for the cavity. This application should be made twice a day.

3. In the most severe cases the lowered vitality and diminished resistive power of the system due to the absorption of toxic matter, both inhaled and swallowed, combined with the local action of pyogenic and saprophytic organisms which find abundant pabulum for the formation of intensely irritating chemical bodies, produce in the bone around the loculi a condition of rarefying osteitis. Here the most radical treatment is absolutely necessary if a rapid cure is to be effected. With a sharp spoon, all soft material must be thoroughly scraped away until hard bone is felt, when pure carbolic acid should be applied, and the cavity packed fairly firmly, the dressing being changed every four hours during the day. By the adoption of these methods, I usually succeed in effecting a complete cure, and without subjecting the patient to much inconvenience.

[Written for the MEDICAL BRIEF.]

A Contribution to the Pharmacological Actions and Therapeutical Uses of Manganese.

BY C. D. F. PHILLIPS, M. D., F. R. C. S. (EDIN.), F. R. S. (EDIN.), LL. D. (ABER.), LL. D. (EDIN.), LL. D. (GLASG.).

Late Lecturer on Materia Medica, Pharmacology and Therapeutics, Westminster Hospital, London, and Examiner in the Universities of Edinburgh, Glasgow and Aberdeen. London, England.

There is no doubt that in the domain of *materia medica*, manganese occupies a somewhat anomalous position. The therapeutical value of its salts is well established, but its pharmacological actions have not yet been worked out with that completeness of detail which has been observed in the case of other drugs such

as aconitine, digitalin and strychnine. The deep-rooted belief that manganese is in some way related to iron and that it is useful in anemia may have something to do with the false position assigned to this useful remedy. A reputation of this kind is eradicated with difficulty, although numerous observers have shown that manganese is of no value in the treatment of either common anemia or the pernicious variety.

The preparation of manganese commonly employed is the permanganate of potassium, although this can not be regarded as typically representing the manganese action. The same may be said of the permanganate of sodium and the permanganate of calcium. The binoxide of manganese is insoluble in water, but dissolves readily in hydrochloric acid, so that it is therapeutically active. The citrate is soluble and is a double salt with sodium citrate. There are various combinations of the citrate of manganese with iron, quinine, strychnine and other bases, but these are outside the scope of the present investigation, which is largely pharmacological. With respect to the permanganate in which the manganese occurs in the acidic radical there is reason to think that it is decomposed in the stomach, forming a salt of manganese, so that its further action may be attributable to the manganese-ions. Its utility is due to its capacity for parting with oxygen to albumin or other organic matter. It is used as a disinfectant and deodorant, but its power in this direction is limited, for when it yields up its oxygen it becomes inert.

The literature of manganese is tolerably extensive, although it must be confessed that the conclusions arrived at are not always reliable or at all events conclusive. Such discrepancies are not unusual in the case of salts presenting a complex chemical composition.

Sir William Turner, of Edinburgh, found evidences of manganse in the urine of a diabetic patient who had taken potassium permanganate for three weeks, showing that that salt was absorbed and eliminated by the kidneys. These observations were made more than forty years ago. Traces have been found in the urine of man and more than traces in the urine of herbivora; these are derived from vegetable food, hence there must be some absorption and therapeutical effects confirm this.

The presence of manganese as an essential element of the corpuscles has been relied upon as a guide to its action, but it seems to be rather an accidental than a normal constituent of the blood. Wurzer first announced its presence, and Millon, Hannon and Burin-Dubuisson corroborated this, while Melsens, Bonnewyn and others could find no manganese on repeated analysis. Melsens operated on seven kilogrammes of blood from twenty-one different persons. Glènard analyzed in various ways blood from forty subjects of varying ages, and found the metal in one case only. He concluded "that manganese is not an essential element of human blood; it may be found accidentally, but only in minute amount; it does not enter by the lungs or skin, as proved in the case of miners." Riche detected minute quantities in the blood of bullocks and a trace in human blood.

According to Laschkewitz, the organic salts of manganese in moderate doses (subcutaneously) slow the pulse and the heart-action, and cause lowering of the blood-pressure and paralysis of muscles and nerves; after death from manganese poisoning the heart is found dilated and does not respond to electrical stimulation. This may be the case in laboratory experiments, but in a case of acute poisoning (thirty-five minutes) from a large dose of permanganate taken in beer the heart was arrested in systole. Professor Kobert finds that the intravenous injection of manganese salts first transiently stimulates the vaso-motor center, then paralyzes it; later the heart itself is depressed and finally paralyzed; the cardiac nervous centers suffer first and later the muscle.

Certain nervous phenomena are determined by manganese salts. Toxic doses cause death with convulsions and one-half to one gramme injected into the veins of rabbits or dogs produces cramp and death from heart-palsy, or else faintness and weakness and slower death with fatty degeneration. The pupils are dilated; the temperature is unaffected. Rabuteau injected a little more than one gramme into a vein of a dog, and at first there were no symptoms, but on the fol-

lowing day tetanic convulsions set in with trismus and opisthotonos, and death followed shortly; the white substance of the spinal cord was shrunken, the grey matter congested. Kobert states that rabbits after large doses subcutaneously die in epileptiform convulsions; after non-lethal doses they suffer from diarrhea, loss of appetite, and great depression of the function of the spinal cord, the transverse conducting power being destroyed, though the longitudinal conduction remains intact. In dogs excessive vomiting and great nervous depression are seen after hypodermic injection; there are no convulsions, but jaundice and renal inflammation are striking symptoms always present. It must be remembered that rabbits can not vomit, hence the difference in symptoms.

Large doses given for a long period induce effects analogous to those of zinc—progressive wasting and feebleness, a staggering gait and paraplegia. Kobert states that chronic poisoning can only be induced if the salt is administered by subcutaneous or intravenous injection. Cases of chronic poisoning observed in man have been reported by Couper in workers in manganese. The symptoms were muscular wasting and paralysis, which may have been due to other metallic admixtures.

The sulphate has been credited with the power of stimulating the secretion of bile since the observations of C. G. Gmelin, who found in animals poisoned by large doses inflammation of the stomach and intestines, and "so large an amount of bile poured out that the whole tract was colored like yellow wax." He reported a less degree of the same effect in man, and Ure found that sixty to one hundred and twenty grains acted as a cholagogue purgative. Goolden took various doses from one up to thirty grains before vomiting occurred, but states that as a rule ten to twenty grains will cause nausea and purging with a copious secretion of bile. Professor Rutherford, however, failed to corroborate this experience, at least in animals, for after giving sixty grains to a dog, the biliary secretion was at once lessened, and severe diarrhea occurred. After death the mucous membrane of the small intestine was found pulpy, "as if the epithelium had been dissolved by caustic." In another dog a dose of twenty grains caused lessening of bile, although benzoate of sodium given afterwards stimulated its secretion. Rutherford concludes that the drug is a powerful intestinal, but not an hepatic stimulant, acting very like sulphate of magnesium, so that this particular salt can hardly be regarded as presenting the action of the manganese-ions.

The following observations may serve to throw some light on moot points connected with the pharmacology of manganese:

The close chemical alliance of manganese to iron has led many investigators to administer it to the animal economy with the view of ascertaining if it may not be possible to replace the latter metal in the blood by the former. But the results obtained are more or less contradictory, and it is therefore desirable, not only from the mere theoretical, but also from a practical standpoint, to establish the fact whether, when every imaginable consumption of iron is avoided, the manganese given in an iron-free diet to a living animal, could be made to act as a substitute for it. Since the artificial producing a manganese hemaglobin is impossible in the present state of chemical knowledge, a preliminary research had to be made with the view of selecting from the different groups of manganese compounds one which would have a neutral effect on the entire organism except upon the blood itself.* The experiments performed were the following:

THE EFFECT UPON THE COAGULATION OF EGG ALBUMIN OF MANGANESE PREPARATIONS.

PREPARATION.	AT 15°C.	AT 100°C.
Permanganate of Potassium	No precipitate	No precipitate
of Sodium	No precipitate	No precipitate
of Calcium	No precipitate	No precipitate
of Barium	Abundant.	Coagulation.
of Zinc	Flocculent.	Coagulation.
of Silver	Precipitate.	Coagulation.
Manganese:		
Chloride	No precipitate	Coagulation.
Bromide	No precipitate	Coagulation.
Iodide	No precipitate	Coagulation.
Acetate	No precipitate	Coagulation.
Citrate	No precipitate	Coagulation.
Lactate	Trace of precipitate	Coagulation.

* Turner (1861), Vulpian (1881), Lacerda (1882), worked out permanganate of potash and proved its action due to its oxidizing power. Gmelin (1824), worked fully the sulphate of manganese. Couper (1837), worked out manganic acid (MnO). Laschkowitz (1866) worked out the action of the lactate and citrate upon frogs, rabbits and dogs. Hoppe-Seyler (1858), worked out fully the sulphate. Wibmer (1831) found the carbonate of manganese perfectly inert.

THE PRECIPITATION OF PROTEIDS BY MANGANESE CHLORIDE, BROMIDE AND IODIDE.

None of these substances were found to precipitate egg albumin, propeptone.

Fibrin is dissolved only to a very small extent by saturated solutions of manganese chloride.

THE ACTION UPON THE BLOOD OF SOME OF THE MANGANESE COMPOUNDS.

The effect on the red blood corpuscles of man:

5% Watery Solution of	Reaction.	Observations Under the Microscope.
Permanganate of Potassium.	Strongly acid.	First, crenates corpuscles slightly and some plasma exudes. No formation of rouleaux. Secondly, discs become brown spheres.
of Zinc.....	Acid.	The discs become oval. A bulb can be seen at one end of a single disc.
Manganese: Chloride.....	Feebly acid.	Retain their shape, but after twenty-four hours become crenated.
Sulphate	Feebly acid.	Discs at once become shrunken, and like stramonium nuts. After twenty-four hours discs appear normal again.
Citrate.....	Neutral.	Decolorizes the discs, the stroma may be seen. No crenation.
Lactate	Acid.	No alterations observed.

NOTE—The acidity was tested by litmus paper.

THE ACTION ON THE SPECTROSCOPICAL APPEARANCE OF THE BLOOD OF SOME OF THE MANGANESE COMPOUNDS.

The blood of frogs was used. The permanganates of potassium, sodium, calcium, barium, zinc and silver turn the spectrum of oxyhemoglobin into that of methemoglobin, which was afterwards confirmed by changing it back again into hemoglobin by the addition of ammonium sulphide, or better still, by Stokes' reagent. Under similar circumstances the permanganate of potassium exerts the strongest action, so that two drops of a five per cent solution will produce the characteristic line of methemoglobin in blood diluted forty times, provided that about fifteen c.c. be taken, whereas permanganate of zinc requires double that amount to produce it, although on the left side of Frauenhofer's Line D. a shadow is very quickly perceptible.

The manganese salts of the organic acids, acetic, citric and lactic, leave the oxyhemoglobin for a long time unaltered: upon the first addition the bromide and chloride do not seem to produce any pronounced change, but if strong concentrations of oxyhemoglobin were employed there could be demonstrated a change going on in the color of the solution, which alteration could also be recognized by the spectroscopical appearance.

For example, the following experiment may be described:

Take the blood of a frog, shake it up well with air, divide it into two parts in two test tubes of the same caliber.

The results are tabulated below:

A.	B.
1st Action— Dilute with water.	1st Action— Dilute with saturated watery solution of manganese chloride (Columbers).
Observation— No alteration in color, only in depth.	Observation— Distinct alteration in color, the blood assuming a brighter tint.
Spectroscopically— All absorbed except orange and red rays, which are quite bright.	Spectroscopically— Absorption of violet end to D. of red to B. half shadow to C.
2d Action— Dilute till green rays between F ½b is visible.	2d Action— Dilute of manganese chloride gives no appearance of same part of green. Absorption of red rays scarcely weakened.
3d Action— Dilute till oxyhemoglobin lines are distinctly visible.	3d Action— Dilute with same amount of $Mn.Cl_2$ absorption of red rays as above half shadow between F and G.

The two test tubes closed and put aside and after months one appears to contain hemoglobin and the other acid hematin.

Blood.—In regard to the action of manganese compounds on the blood and its constituents, it may be stated that *the permanganate compounds*, from their oxidizing power, dissolve the whole mass of *the blood* into a clear brown solution, and at the same time they distinctly arrest the coagulation of the blood. It must always be remembered that permanganate salts act in virtue of their being so highly oxidized, and not owing to the manganese they contain.

Fibrin.—If fibrin be taken, which has been either preserved by hardening in alcohol or freshly prepared, and exposed

to a solution of permanganate of potassium, it will be found readily to be dissolved by the permanganate of potassium, yielding a brown solution. From this solution it may be precipitated by the addition of sodium chloride, the solution formerly brown becoming quite colorless or a little flesh pink. A similar reaction may be effected by means of sodium-bicarbonate in place of the chloride.

The manganese acetate, citrate, and lactate, hinder the coagulation of blood, and similarly manganese bromide and chloride arrest the clotting of it also.

Blood.—In regard to the manganese chloride a further observation was conducted. An equal amount of frog's blood was placed in two dishes; one was treated with distilled water, the other with manganese chloride (five per cent of aqueous solution).

After one hour the aqueous solution of the blood consisted of one large clot; the manganese chloride preparation in the same length of time, however, was still liquid, the red plasma mixing in beams with the serum and manganese chloride if the dish was turned to one side, *i. e.*, the corpuscles had been allowed to gravitate to the bottom of vessel.

After twelve hours the same condition was maintained, both preparations still being red in color, but after twelve hours more the manganese compound became brown, owing to the formation of acid hematin.

Fibrin.—Fibrin becomes, to a very small amount, dissolved by saturated solutions of manganese chloride.

If the filtered solution of fibrin in permanganate of potassium is left to stand two days, then a brown flocculent precipitate is thrown down.

If this solution now is subjected to heat and treated with sodium chloride there is neither an increase in the quantity of precipitate nor the production of a violet color in the solution, as might be expected and would be due to the formation of permanganic acid or to manganese sulphide, which would be of a flesh pink color.

Blood Serum.—In respect of the *proteids of the serum of the blood*, the scheme (table 1) for egg albumin holds equally good for them also. Manganese chloride does not precipitate serum albumin, even if the solution be saturated with it.

The effect upon the capillaries of the frog.

The action of *permanganate of potassium*, K. Mn. O_4, upon the *capillaries*.

2.5 c.c. of a saturated solution of permanganate of potassium was added to 22.5 c.c. of a 0.6 per cent solution of chloride of sodium. The vena hypogastrica of a large frog was prepared, and ten minims of the above solution were injected.

The frog having been made reflexless by destroying the nervous communication between the Occiput and Atlas vertebra, the circulation, which was observed by the microscope in the web of the frog's foot, was seen to stop for one moment, but it commenced to go on again almost immediately. After a quarter of an hour capillaries *formerly not seen* could be observed by the *appearance of a red color in them.* In about three-quarters of an hour the circulation was stopped in one of the larger vessels, though in the smaller ones it still went on; and the blood corpuscles continued to present their normal appearance.

The stoppage of circulation having spread, *the heart was exposed, but still found beating.*

This experiment shows the difference between the action on the heart of manganese chloride and permanganate of potassium.

EXPERIMENTS CONCERNING THE DEPOSITION OF DISSOLVED FIBRIN IN PERMANGANATE OF POTASSIUM IN THE BODY.

Fresh purified fibrin was dissolved in permanganate of potassium, to complete saturation, and the solution filtered, and in the filtrate the presence of the fibrin, or that of the body which replaces it, was shown by means of sodium chloride test.

Under the skin of the neck of a medium-sized guinea pig ten c.c. of this filtrate were injected. Protracted pains were observed after the injection, lasting for about two hours; after nine days the animal was found dead, though in the meantime no symptoms had been observed which could be ascribed to the injection.

Post-Mortem Examination.—General appearance of the parts at site of injection

was perfectly normal; subcutaneous connective tissue of the neck was of a brown color, the point of the wound light red, and around it a small deposit adherent to the skin had formed. This deposit was of a hard consistency, was perfectly white, and showed, when cut, a fibrillar structure.

The brown red connective tissue, with some fat, was then cut out and placed in a vessel and treated with distilled water. This watery extract showed with the spectroscope oxyhemoglobin, but no methemoglobin, and the absorption bands of the permanganate of potassium could *not* be detected in it. There was *no* manganese reaction with ammonium sulphide, nor by fusing with saltpetre and soda.

Another guinea pig was similarly treated. It was killed after two days and during that time lost one-twentieth of its weight. The general results were the same as in the foregoing instance.

EXPERIMENTS WITH REGARD TO THE ELIMINATION OF MANGANESE FROM THE BLOOD.

A rabbit weighing five pounds was injected subcutaneously with two c.c. of five per cent solution of manganese chloride solution. During the following twenty minutes no effect was observed; during the next four or five hours three more injections were given of the same solution, making a quantity of fifteen c.c.

The pulse was counted fifteen minutes after each injection—the animal being at the time under no narcotic—and a diminution in rapidity was observed, viz.: two hundred, one hundred and sixty, one hundred and four per minute respectively. Three hours afterwards no abnormal symptoms could be observed, but sixteen hours after the first injection it was found dead.

Post-Mortem Examination.—Rigor mortis was not pronounced one hour after death. Much injection of the vessels was observed around the puncture produced by the cannula of injecting needle. The blood was brown and clotted. The kidneys hyperemic. The blood in the vena cava was fluid, ecchymoses were found on the surface of the lungs. Chemical examination showed manganese present in the kidney, urine, brain, and especially in the liver, but none in the blood.

EXPERIMENTS CONCERNING THE ACTION OF MANGANESE BROMIDE A CHLORIDE ON FROGS.

Frogs.—The effect of bromide chloride of manganese when exh subcutaneously.

(*a*) A frog weighing twenty grammes was injected with two c.c. aqueous solution of manganese br under the skin of the back. The fro viously very lively, showed the first toms of poisoning in ninety seconds duction of the four limbs, and co inactivity. Thirty seconds later e drooped and respiration was slowe deeper, and four minutes after the tion no respiratory movement co observed. The thorax was then o and the heart had ceased to beat, a of a deep venous color; it respon pinching by single contractions on

At site of injection there was n venous hyperemia. The blood in t sels appeared black, only in certain brown, the arteries of the skin were distended.

(*b*) A frog weighing thir grammes was similarly injected wi c.c. of an aqueous solution of man chloride.

There was no difference recogn between the result of this treatmen that of *a*, either in a general or par sense.

Rabbits.—The effects of man chloride when introduced by the m

The hydrochloric acid in the st does not form a new compound. A weighing five pounds received five five per cent solution of manganese ide as an injection into the stomach effect being observed after ten m the dose was repeated. During th three days the rabbit appeared to excellent condition. On the third d other four c.c. of the same solution thrown into the stomach. It was dead the following morning.

Post-Mortem Examination—No mal anatomical appearances were The lungs were full of air. The re of the liquid in the stomach was Urine contained albumin and also the green violet rings with nitric (Gmelin's test for bile pigments.)

The contents of the stomach gave a similar reaction when filtered and treated with nitric acid.

In two other instances in which manganese chloride was similarly introduced into the stomach, the urine of the animals after death gave the reactions of albumin and bile, no manganese could be detected in the blood. The mucous membrane of the stomach in both cases was partially necrotic.

Gmelin has shown that sulphate of manganese in large doses in dogs and rabbits, given either by the stomach or subcutaneously, causes general icterus, and bile may be detected in the urine. (Versuchen über die Workengen des Baryts, u. s. w., auf dem thierischen organismus. (Tubingen, 1824.)

He also specially alludes to the gastro-enteritis and to the peculiar form of nephritis, which partakes of a parenchymatous or interstitial character.

INJECTION OF MANGANESE CHLORIDE INTO A DOG BY THE MOUTH—GASTRO-ENTERITIS.

Male dog weighing fourteen pounds received a subcutaneous injection of ten c.c. of seven per cent solution of chloride hydrate, and ether was administered.

When narcosis was established, an injection of five grammes of manganese chloride in twenty c.c. of water was given by means of a catheter into the stomach, and narcosis stopped. The dog immediately tried to walk about, but had no coordination of his limbs. Four minutes after the injections he vomited matter containing an abundance of manganese. In twenty minutes he vomited for a second time, and again in two minutes after that. Manganese could readily be detected in each instance. He then fell asleep. The following morning he was greatly depressed, refused food, and ultimately died thirty-six hours after the administration of the drug.

Post-Mortem Examination.—The stomach contained only blood and mucus. The surface of the viscera was pale, and hemorrhages were discovered throughout the whole of the mucous lining of the intestinal tract, some being the size of a shilling, others smaller. The intestine was filled with a dark colored fluid, consisting of mucus and blood.

Manganese could not be detected in the urine nor in the blood of the limbs, but it was found in the brain.

EXPERIMENT TO ESTABLISH WHAT DOSE OF MANGANESE CHLORIDE A DOG COULD BEAR.

A dog weighing fourteen pounds was injected subcutaneously with ten c.c. of ten per cent solution of chloral hydrate, and twenty minutes later ether and chloroform were given. Respiration sixty-nine and pulse two hundred per minute.

After the reflexes were abolished 0.25 grammes of manganese chloride was injected under the skin, the fatty tissue being avoided. One minute after the injection, respiration forty and pulse one hundred and eighty per minute.

During the next ten minutes no further symptoms developed and the chloroform was stopped, and in eight minutes more the animal walked about without any symptoms which could not be directly referred to the chloroform.

The animal was somewhat depressed and sleepy during the following week, but after that completely recovered.

Six weeks after the injection it was killed, and the *post-mortem* examination revealed nothing abnormal. No gastro-enteritis could be recognized.

The anesthetic to a certain extent vitiates this experiment.

EXPERIMENTS UPON THE ACTION OF MANGANESE CHLORIDE ON THE HEART OF THE FROG.

A frog's heart was excised, and a drop of five per cent solution of manganese chloride placed upon it. Instantly, contraction ceased and it was not possible to excite even a single contraction again.

When one-tenth per cent solution was employed the heart's contraction ceased, and could not again be made to continue to contract, though single contractions could be produced on mechanical initiation.

ANTAGONISM BETWEEN MANGANESE CHLORIDE AND PERMANGANATE OF POTASSIUM.

If a solution of manganese chloride of a strength sufficiently weak for the animal to bear be injected under the skin of a frog, and under similar circumstances

permanganate of potassium be employed, the following is the result observed:

ACTION.	$Mn\ Cl_2$	$K.\ Mn\ O_4$
On the heart	Destructive.	Indifferent or Increased.
Excitability of reflex action	Diminished.	Increased.
Blood	Reduction .. (Hematin..)	Oxydisis.

EXPERIMENTS CONCERNING THE SUPPOSED ASTRINGENT POWER OF MANGANESE CHLORIDE.

A dog suffering from a severe conjunctivitis was experimented on.

The palpable conjunctiva was painted every other day with five per cent solution of manganese chloride.

No astringent effect was noticed locally, even after five days, but some brown spots were visible in the region of the insertion of the inferior oblique muscle. The pupils were dilated.

On the sixth day the animal was killed.

Post-Mortem Examination.—Acute gastro-enteritis was present, as also hemorrhagic nephritis with albumin and bile present in the urine. There was no manganese detected in the urine.

From its behavior towards the heart it would hardly be expected that this drug would produce any vaso-constricting influence on the vessels, but as some authors* speak of it as possessing such an action it may be well specially to mention it here.

This experiment shows that manganese is absorbed from the conjunctiva and that it has an action on the blood in the organism as seen in the formation of the brown spots.

The chloride of manganese and iron has been used by Pétrequin in perference to the simple perchloride of iron, as a local hemostatic; in Italy it has been applied to necrosed bone, and injected into fistulous tracts and hydroceles, but it has no advantage over other remedies.

The same remark applies to the use of an ointment made with the oxide of manganese (two drachms to one ounce of lard), which has been recommended in scabies and ringworm, and combined with sulphur in prurigo. The potassium permanganate treatment for chronic local patches of eczema is sometimes indicated; after removal of crusts the reddened surface is dried and painted with one in ten solution in water, once or twice daily, until a black adherent covering forms, and this is left on for six to seven days before separating. The application is painful at the time, but I have found it effective; it is suitable only for covered parts. A weaker solution is used as a lotion for ulcerations and suppurating wounds and as injection in leucorrhea, ozena, empyema, gonorrhea, etc., for which the zinc permanganate is specially good, while the calcium compound is best as a wash or spray in stomatitis or diphtheria. The pink or green color rapidly changes to brown on contact with discharges, which may be considered disinfected when the injections return unchanged. Brown stains may be removed by sulphates or oxalic acid in solution.

In snake poisoning the admixture of potassium permanganate with venom rendered it inert, and Lacerda reported that intravenous injection of a one per cent solution soon after one of snake poison, proved antidotal in dogs. Vincent Richards found that if the salt were injected into the puncture sufficiently soon, ill-effects were prevented. Twenty minutes of a two per cent solution freshly prepared should be injected under the skin in two or more places, and especially into the orifice made by the fangs, for it is essential that it should come into actual contact with the poison. It must be remembered that this is a chemical, not a physiological antidote. It by no means precludes the use of antivenine.

The value of permanganates in opium poisoning, suggested by B. Smith in 1884, has been amply demonstrated by W. Moore and others. The former took five grains of morphine sulphate in one ounce of water, and a few seconds afterwards eight grains of potassium permanganate in eight ounces of water, and found no narcotic effects whatever. A case where sixteen grains was taken recovered after three doses of five grains each of the antidote. Analysis of vomit mixed with known quantities of both drugs proved the morphine was no longer detectable.

* Nothnagel and Rossbach, Hoppe-Seyler, finds that sulphate of manganese produces very marked constriction of the vessels, and also paralysis of the heart and intestines.

The proper proportion is six grains of the antidote for each ounce of laudanum taken, if known, or if unknown, eight to ten grains in four to eight ounces of water. The stomach should be washed out with a weaker solution two or three times at intervals of half an hour. When swallowing is difficult the remedy may be given by nasal tube or by hypodermic injection.

Free chlorine is readily and cheaply generated by acting on peroxide of manganese with hydrochloric acid, or by heating a mixture of common salt and peroxide with sulphuric acid and water in equal parts. The former process is recommended in the Swedish Pharmacopeia, one part of peroxide and four of acid being ordered; the latter process is known by the name of Guyton Morveau. A mixture of manganese oxide, seven and one-half grammes, and ten grammes of salt, with sulphuric acid and water, of each twenty parts, will disinfect a space of thirty cubic meters. A saturated solution is five per cent, and when diluted five hundred times is suitable for lotions, disinfection of hands and of stools in typhoid, and for the disinfection of drains. It disintegrates fetid and decom posing organic substances, and destroys bacteria, but it is not now less frequently used than carbolic acid.

I have mentioned that Ure found one to two drachms of the sulphate act as a cholagogue purgative, and Goolden gave it in cases of enlarged liver with dark or pale stools and jaundice, when no abscess or acute symptoms were present. Most of the patients (at the Dreadnought Hospital) were in a weak condition, having returned from India, and he sought for a non-mercurial remedy to stimulate the liver, and found that ten or twenty grains of sulphate of manganese, though at first it excited nausea or vomiting, soon acted on the bowels to the marked relief of the patient, and with rapid clearing away of the jaundice. This favorable result has not been corroborated by others, but Goolden has written further, stating that he has used the remedy with success in hepatic dropsy, hemorrhoids and bronchial congestion.

Leared found that oxide of manganese had decided power in relieving gastrodynia and pyrosis. In the cases in which he describes benefit, epigastric pain, severe and radiating, coming on not immediately, but soon after food, especially after albuminous food, were the prominent symptoms. Pyrosis and vomiting were sometimes present. The tongue was generally red and patchy, and there was a rapid shedding of the epithelium, and exposure of the hypersensitive mucous surface. Bismuth is an excellent remedy for such a condition, but Leared found manganese relieve it more quickly, and without causing constipation. He reports two cases of gastralgia, "severe pain with occasional vomiting," one case of derangement of the stomach, sympathetic with that of the uterus, and one of pyrosis, with "irritable mucous membrane;" all these got well quickly with ten-grain doses of the oxide.

The real therapeutical use of manganese is in the treatment of amenorrhea. For this purpose it was originally recommended by Ringer and Murrell, and their observations have been amply confirmed. By amenorrhèa is meant the functional condition, not suppression of the menses due to organic uterine disease or to pregnancy. It proves most efficacious in cases in which the flow has ceased from exposure to cold. It will not succeed when anemia is the cause of the trouble. In these instances a preliminary course of iron is necessary to ensure success. The permanganate is not easy of administration. Dissolved in water it forms a solution which is nauseous, and the taste of which is not readily covered by any of the ordinary flavoring agents. It may be given in two-grain tablets, but caution is necessary in their administration, for if they adhere to the mucous membrane of the esophagus or stomach they act as an escharotic, and may inflict a considerable amount of injury. They should be given only after food, and should be followed by a copious draught of water or other fluid. The permanganate may be made into pills with kaolin, but the same precautions as to administration will have to be observed.

At a later period, Murrell advocated the use of the binoxide in this condition, and it certainly has many advantages over the permanganate. It is not caustic, and may

be given either in powder or in the form of a tablet. Its administration should be commenced some four or five days before the expected period. Murrell has also published cases in which the citrate of manganese has yielded good results. When the amenorrhea is due to anemia the citrate of manganese and iron may be prescribed, but as the amount of iron in this combination is small, it would be better to give the sulphate or the perchloride of iron first, reserving the manganese until the condition of the blood is improved.

Speaking generally, it may be said that although the sphere of action of manganese is limited, it is deserving of more attention as a therapeutical agent than it commonly receives.

[Written for the MEDICAL BRIEF.]

Opium Eating and Smoking.

BY DONALD MACLAREN, M. A., M. D.,
London, England.

NO. II.

As I pointed out at the conclusion of the last article, there is nothing immoral in smoking opium. Morals are pretty much a question of geography. As Sir William Moore very justly points out, many customs which are tolerated and recognized by us would be considered immoral in countries where opium smoking is indulged in without reproach. Our modern balls and drawing-room dances would excite the astonishment and derision of many nations which it is our pleasure to regard as less civilized than ours.

Lord Wolseley, who is nothing if he is not outspoken, says: "If we are sincere in wishing to stop intemperance let us set to work in this monster Babylon in which we live. The sincerely moral man, who does not live on a pabulum of sentimental claptrap, purifies his own house and home before he undertakes distant crusades. We only make ourselves ridiculous by declaiming against what we style sins which we sanction around us. When I see strong measures taken in England to prohibit the sale of poisons in the form of spirits of all sorts, I shall believe in the new reformation. It is to me, in our present state, the most monstrous imposition and humbug to preach abroad what we dare not carry out at home."

The editor of a well-known Calcutta medical paper, says: "When England has purified her home life, when she has shut drunkenness out of her cities, then only may she go to the nations of the earth, and, having clean hands, bid them boldly to purify themselves from all evil."

Surgeon-General Mouatt tells us that while there are ten thousand four hundred and seventeen shops licensed for the sale of opium in British India, with a population of two hundred and twenty-two million, there are one hundred and eighty-four thousand seven hundred and forty-three for intoxicating liquors in England and Wales, with a population of twenty-nine million.

As to opium being always destructive to health, that I utterly deny, unless it is taken in excessive quantities, and, as before observed, nearly everything would be destructive to health if used in excess. When I was examined by the Opium Commission, says Sir William Moore, I mentioned that life insurance companies did not charge extra premium to moderate opium smokers, which, apparently, was received with doubt by the commission. The secretary of the Oriental Life Insurance Company states that the Oriental company, which insures more native lives than any other, has not had to deal with a death from opium for twenty years. Out of nine hundred and seventy-three death claims in twenty years, insuring in the aggregate thirty-four lakhs of rupees, there was not a single one of them attributable to the use or abuse of opium. Many suppose the use of opium must cause torpor, lethargy, and sleep, so unfitting a person for business. But the first action of opium on the system is exhilaration or excitement. As regards effects, I compare several pipes of opium to a glass or two of champagne. It brightens the intellect, temporarily strengthens the system and promotes physical activity and digestion. I liken several more pipes of opium to several glasses of brandy and water. The person becomes drowsy; but there is this difference, opium never develops the quarrelsome stage which so generally precedes the

drowsy stage of alcohol. The opium smoker's attitude is always one of repose. The opium smoker is peaceful without being quarrelsome. He gives the police no trouble, as the devotees of alcohol do. The Chinamen in Calcutta, all opium smokers, are the most healthy, peaceful, and industrious of all classes, and it is rare to see a Chinaman in a police court. In his "Lives of Bombay Opium Smokers," Mr. Pestonjee says: "From the statistics of crime during the last eight years, it appears there has not been a single case of criminal offense originating from opium."

In my description of the opium shops of Bombay, I said: "When a person begins to smoke, his faculties appear devoted to the matter in hand, and all his attention is directed to the manipulation of his pipe and lamp." The appearance of many of the people at the opium shops is very characteristic. There is no joviality perceptible among them, as there would be among a number of persons indulging in liquor. On the other hand, there is no noise or quarreling, as would certainly result from liquor. The different stages of alcoholic inebriety, the friendly, the argumentative, the captious, the communicative, the sentimental, the quarrelsome, the maudlin affectionate, and the extremely drunk, have no place in the opium house. A little conversation may take place, but it is in low strains, and principally between those settling down for their smoke. The different expressions of feature are a study. Here is one showing that stern and passive repose which, according to Epictetus, is happiness. Here is one whose countenance expresses perfect inanity, and who, like "my Uncle Toby," has "no desire to trouble his brain with abstract thinking." There is another, not yet under the influence of the drug, bowed in a meek and suffering manner, probably from rheumatic pains, and looking as miserable as if he had spent the day in reading a pamphlet on cholera-morbus or self-mortification. He flies to opium "to mitigate the ills he can not shun;" but "not poppy nor mandragora, nor all the drowsy syrups of the world" will in this life afford him more than temporary relief. On this one's face there is a vacant smile, for he is the victim of an ecstatic and pleasurable dream. But a few minutes ago, doubtless, "his bones were filled with aches." It may be that the very absence of pain under the magic of opium causes the gleam of pleasure on his face. Were he acquainted with the quotation he would probably exclaim: "If 'twere now to die, 'twere now to be most happy:" Next are the worn and well-marked features indicating some chronic internal disorder, probably hepatic. For in India—

> "The liver is the lazaret of bile, but very rarely executes its function,
> And the first passion stays there such a while, that all the rest creep in and form a junction."

He, also, is doomed; but opium will probably prolong and certainly smooth his remaining span of existence. Depriving him of opium would be a positive cruelty.

The physical attributes of many of the frequenters of the opium houses are not of a high order. Some are, apparently, old enough to be a legacy from a past age, or an importation from Pompeii. Many of the habitués, although not in reality old, are yet wizened, prematurely old, and debilitated. Most, like Cassius, have "a lean and hungry look," as if suffering from famine. "Sleek-headed" men are in a minority. Many enter like animated charnel houses, with merely skin and flesh enough to conceal the pathological horrors they contain. *Yet this is not attributable to opium.* It is the general mode of life, the unsanitary surroundings, want and disease, which produce a similar class in other large cities where opium is not smoked, and where gin takes its place. This person suffers from a bad cough, and is, evidently, asthmatic or consumptive; that person is weakened by rheumatism; a third is shivering in the cold stage of ague; a fourth has some irritating and painful skin disease; a fifth has suffered from want of food, and "to appease the hungry edge of appetite" flies to opium, as the others have recourse to opium for the relief of pain. Probably two-thirds belong to one or other of the classes referred to, and, in my opinion, they do much better for themselves by smoking *chandul* than they would do by drinking gin or native liquor. Those who cast the stones with such virulence, and so promiscuously, at these poor opium-

smokers, do so in ignorance, and without the grace of that best of virtues—Charity. They ignorantly regard the maladies they see in opium houses, not as diseases for the relief of which opium is taken, but as the effects of opium, and on such mistaken grounds they uncharitably condemn. Doubtless some take to opium without the excuse of any malady, simply as a solace against the worries of life, just as some people take to drinking, and others commit suicide, to avoid the evils of existence. The Hindu or Mohammedan, with greater philosophy than the average European, takes to opium smoking. In the magic of opium he finds such content that he would not trouble himself so much as Diogenes did if Alexander appeared between him and the sun. *That* content, the virtue of prosperous people is, however, of quite a different order. Abstinence is so much more pleasant on the other side of indulgence. Men having a good digestion, which somebody coupled with a bad heart, after dining sumptuously, may leave their domestic bliss, and with full pockets attend the meeting of the Anti-Opium Society, and there condemn opium smokers, one and all. The Pecksniffian strain so often adopted may be paraphrased into "Oh! my worldly friends pursuing the phantom of pleasure through the guilty mazes of opium dissipation, how easy it is to be happy if you will only be good!" But a person ignorant of the motives which lead to opium smoking is unable to differentiate between the use and abuse of the drug, and is altogether uncharitable to the defects of human nature.

When the use of opium is abused, there is no doubt that it produces bad effects. The first result is constipation and disturbance of digestion. The digestion becomes slower. Partially digested food passing into the bowels acts as an irritant, and excites diarrhea, with consequent emaciation. As a matter of fact it is but a small minority of opium users who take it to excess. We do not propose the abolition of alcohol because of a few dipsomaniacs, and there is really no valid reason why the abolition of opium should be proposed because of a few opiomaniacs. It has been said that the use of opium is more deleterious than the use of alcohol. This I altogether deny. It is well known that the excessive use of spirits causes fatty degeneration, disease of the liver, kidney, brain, heart affections, paralysis, and often the active delirium known as delirium tremens. Opium does not cause anything of the kind. In excess, as previously mentioned, it causes slow digestion, consequent diarrhea and following emaciation. Yet although this is the case in exceptional instances, the total benefit derived from opium far counterbalances the occasional injury. The statistics of the lunatic asylums of India, while showing that many develop insanity from spirits, or from bhang, show that only very few become lunatics from indulgence in opium. The anti-opiumists would abolish the use of opium, except when ordered by a physician as a medicine. If this were done it would be a most grievous interference with social habits and customs of large sections of the people of India, such as no government has a right to impose. For example, opium is an important dietetic factor in enabling men to undergo continued hard work without breaking down. The Rajpoot would not be able to offer the stirrup cup of usual pawnee (opium water) to his friend, as the latter leaves in the grey of the morning, or with the rising of the moon, for a twenty or thirty mile camel ride through the sands of Marwar, Bickaneer or Jeysulmere. Neither would the rider be able to share his opium with his camel or horse, which, especially before the days of railways, was a point of honor with the rider. The camel feeders who take young camels into the desert districts would not be able to subsist on their bag of grain and camel's milk without opium.

Some time ago, one hundred Sikhs were lent for service under the East African Company. As might be expected, some were regular opium eaters, and had seen much hard service without ever having been on the sick list. The boatmen of Bengal, who, after a hasty morning meal, are able to tow a heavy boat all day, would lose their power of doing so without opium. The opium pipe could not be introduced as now, when, after the evening meal it takes the place of the wine or spirits or tobacco consumed in other

countries. The presentation of the opium cup at social gatherings means welcome and good-fellowship. But anti-opiumists cry out against this custom, yet do not object to promote sociableness by means of the wine cup or "pegs."

The person suffering from want of food would not be able to appease his hunger by the customary dose of opium, and when scarcity or famines occur, thousands more would die than before. Neither would the dwellers in malarious districts protect themselves from fever and ague by the use of opium. The dwellers in the Terais especially believe that without opium they would succumb to the miasm, and the same belief in the prophylactic properties of opium is entertained in the fen districts of England.

As before observed, one of the constituents of opium, anarcotine, has been proved to possess great anti-periodic powers. But without considering these special powers, opium smoking in small quantities excites the circulation, and produces a glow throughout the body. In large quantities it soothes the system and blunts nervous sensibility. Both actions are antagonistic to chill, and chill is the first stage of malarious fevers, especially of ague. The Indian, after working and perspiring all day under a tropical sun, is very likely to become chilled by the night fall of temperature, and this liability is increased by his carelessness in not using extra garments. But he comes home, and after, or sometimes before, his evening meal, he takes his opium. As a consequence, instead of feeling cold and shivering, he remains warm and glowing, and so escapes chill, which if not the real and only cause of malarious fever, is certainly the cause of many repetitions of attack.

But perhaps the worst effects would fall on the frequenters of the opium shops who go there to obtain relief from some painful malady. What has been done in the Punjaub and Bombay in the way of suppressing opium has resulted in the formation of opium clubs, and in persons smoking at home.

I find the following in a Bombay paper: "Formerly there were twenty licensed smoking houses. These houses were, under a Government resolution, closed in August last. Since then as many as fifty private clubs have been started where persons collect and smoke opium. While the licensed shops were not allowed to be kept open after ten P. M., the private clubs are kept open night and day. A Government official went to see a few of these clubs. As he entered, some of them —smokers—tried to run away, when an old man of seventy-five years of age, and of excellent physique, got up in a rage, and in a loud tone said, 'You cowards, why do you run away? Stay and smoke. Will they cruelly deprive us of our neces sity? We shall fight it out; at the worst they will kill us.' If what the old man said represents the general feeling of the opium smokers, we are certainly no nearer the solution of the problem than we were. Is it not strange that during the riots, when all the shops situated in Bhendy Bazaar were closed, the opium shop situated in that locality, and owned by a Hindoo, was kept open, unprotected either by the police or the military, and as usual the Mohammedans were purchasing their daily quantities. Yet no attempt was made by the Mohammedans to beat or otherwise molest the Hindoo shopkeeper."

The opium-eater's soliloquy runs as follows:

I'd been cheered up at my chandoo shop, for years at least two score,
To perform my daily labor, and was never sick or sore;
But they said this must not be;
So they've passed a stern decree,
And they've made my chandoo-seller shut his hospitable door.

If I'd only cultivated, now, a taste for beer and gin,
Or had learned at pool or baccarat my neighbor's coin to win,
I could roam abroad o' nights,
And indulge in these delights,
And my soul would not be stigmatized as being steeped in sin.

But as mine's a heathen weakness for a creature-comfort, far
Less pernicious than their alcohol, more clean than their cigar.
They have sent their howlings forth
From their platform in the North,
And 'twixt me and my poor pleasure have opposed a righteous bar!

[Written for the MEDICAL BRIEF.]

A New Operation for Large Oblique Inguinal Hernias.

BY JAMES U. BARNHILL, A. M., PH.D., M. D.,

Professor of the Principles of Surgery and Clinical Surgery, and Chancellor of the Ohio Medical University; Surgeon to the Protestant Hospital; Editor of the Columbus Medical Journal.
Columbus, Ohio.

Notwithstanding the great improvement in hernioplasty in the last few years, the percentage of failures is still quite considerable—from three to five per cent—in the hands of the most skilled operators, and doubtless a much larger per cent in the total number of cases operated upon. The number of hernias which still go untreated is witness to a lack of public confidence in operative procedures.

An analysis of failures in general shows (*a*) that after operations for the restoration of normal inguinal canal and those done by the Bassini method, recurrences result from weak union of the longitudinal fibers of the internal oblique to Poupart's ligament, and this, too, in a certain number of cases, notwithstanding every possible precaution has been observed; and (*b*) that after the typical transplantation operation there are occasional protrusions at the situation of transmission of the cord, and also that there are occasional cases of atrophy of the testicle. The latter effect has usually been attributed to the excision of too many veins, but I am satisfied that pressure upon the cord by the tense fibers of the coapted flaps of the external oblique aponeurosis is an important factor in producing this result.

For most cases, doubtless the Bassini, Halstead, Bloodgood, Ferguson, Andrews or other standard operations should be employed, slight modifications in individual cases giving excellent results; but in quite a number of cases combinations of methods, or new methods, may be worth trying.

This operation is devised for all cases in which imbrication is indicated, especially for large oblique inguinal hernias, with distended abdomen, displaced and partially obliterated conjoined tendon and poorly developed rectus muscle. In large inguinal hernias with considerable extension of the aponeurosis of the external oblique, and those with pendulous abdomen, imbrication of the layers of the aponeurosis of the external oblique may greatly augment the strength of the wall, and the creation of a new canal between the imbricated layers of the oblique aponeurosis, as recommended by Andrews, has additional advantages in preventing recurrences. With a view of preserving these advantages and avoiding possible compression between the edges of the aponeurotic flaps, the cord is passed through an incision in the edge of the flap rather than sharply flexed over the border. In the completed operation the cord passes through the external oblique aponeurosis just above the middle of the canal, and instead of passing between the taut edges of the coapted flaps it is transmitted through a transverse incision in the upper flap, thus strengthening the lower half of the posterior wall with the aponeurosis, as Halstead formerly did the whole canal.

The technique of the operation is as follows:

1. The skin and superficial fascia are divided from the spine of the pubis slightly beyond the internal abdominal ring. The aponeurosis of the external oblique is then incised to the same point, leaving the lower flap of fairly good width. The sac is then separated from the cord, freed of intestine, transfixed, ligated high up and excised, the stump being permitted to retract through the internal ring.

2. If there be varicose veins they are ligated and excised. The transversalis fascia and internal oblique, including the conjoined tendon, are then stitched to the shelving portion of Poupart's ligament, one or two stitches being placed in the internal oblique muscle above the point through which the cord passes, with a view of obliterating the inguinal fossa; the cord being brought well down to the border of the internal oblique, thus giving it considerable obliquity in passing beneath the muscles. Thus the posterior wall of the inguinal canal is in a large measure restored.

3. The lower border of the superior flap is stitched to the under side of the

inferior flap close to Poupart's ligament with mattress sutures—three such sutures being placed in the upper part of the incision over the muscle and cord, the other four being placed beneath the cord. A small incision sufficient to make an opening large enough for the passage of the cord is made in each flap; in the upper one at a point one inch below the internal abdominal ring, in the lower flap at the junction of its lower and middle third, thus permitting the cord to pass obliquely through artificial openings in each layer of the external oblique aponeurosis.

4. The mattress sutures having been tied, the cord passes through the opening in the superior flap and is placed between the imbricated layers of the aponeurosis until it reaches the incision in the inferior flap through which it is passed and the lower inferior flap is then stitched to the upper one with an overlapping of from two to three inches, as the case will permit. It will be thus seen that in its upper third the cord is in its normal situation. In its middle third it lies between the aponeurotic flaps, and in its lower third it is transplanted anterior to the aponeurosis.

5. Both layers of the superficial fascia are then approximated, closed with subcuticular silk-worm suture and covered with a layer of gauze and flexible collodion.

It will be seen that this operation is a combination of Andrews' method of imbrication and Halstead's method of transplanting the cord, though the transplantation in this case only applies to a small portion of the lower part of the canal.

The distinctive feature of the operation consists in the transmission of the cord: (1) through both flaps at different levels; (2) through incisions rather than between the edges of the flaps. This procedure gives greater obliquity to the canal, more valve-like value to the consecutive structures forming the anterior wall, less liability of compression of cord at point of transmission through the aponeurosis and, as it seems to me, a stronger abdominal wall at the point of transmission.

A simple demonstration will show that there is much less liability of the cord being unduly compressed when it is permitted to pass through an incision as here recommended than when it passes around the edge of an imbricated flap. In the former case the severed fibers contracting tend to make an opening, while in the latter a slight increase in tension from whatever cause tends to strangulate the cord and thus cause atrophy of the testicle.

At the points of transmission we will have an active regeneration of connective tissue fibers forming strong and unyielding bands much stronger than can be secured by the adhesion of the longitudinal fibers as approximated in the old operation.

If there be any apprehension of weakening the aponeurosis by the incisions made in it for the passage of the cord, one may be reassured by thinking of the facility and completeness with which connective tissue regenerates, as is illustrated in the regeneration of a severed tendo-Achillis for talipes equinus, and also in the unimpaired strength of the reunited tendon.

The severed fibers reunite, as already explained, around the cord, thus providing a more or less firm band around it and insuring strength to the aponeurosis as a whole. It is quite improbable that an equally strong resistance can be secured by adhesions between longitudinal fibers of the same kind or between muscle and tendon.

Of course, it will be understood that this operation is not recommended for the ordinary case of hernia. In this we get almost perfect results by the simpler methods. In all such we should simply aim to restore the parts to their normal position, but the method here described has special advantages in dealing with large oblique inguinal hernias, especially in cases in which the conjoined tendon is weakened or partially obliterated and the rectus muscle narrow. The posterior wall of the canal is strengthened and additional resistance to the hernial protrusion is given at the point of the passage of the cord through the external oblique aponeurosis, partly by the strength of the fibrous rings themselves and also by the increased valve-like pressure on account of the greater obliquity of the new canal. The cord is abundantly covered in its lower two-thirds by the aponeurosis of the

external oblique and below this by the layers of the superficial fascia, adipose tissue and skin.

It is now five years since I performed my first operation by this method, and this case, together with several others since that time, have been entirely successful.

248 East State Street.

[Written for the MEDICAL BRIEF.]

Sulphate of Copper in the Treatment of Typhoid Fever.

BY J. F. STEVENS, A. M., M. D.,

Dean of the Nebraska College of Medicine; Medical Department Nebraska Wesleyan University; Professor of the Principles and Practice of Medicine in Same.
Lincoln, Neb.

Copper is one of the most potent algæcides known. Under favorable conditions 1 part of copper per 1,000,000,000 suffices to destroy spiogyra. A large majority of algæ are destroyed by 1 to 3,000,000. The colloidal solution of copper, produced by the action of water upon metallic copper surfaces, proves to be the most destructive. Possibly this is due to the perfect solution formed. Nor is copper fatal to algæ alone. Under favorable conditions the bacilli typhi abdominalis succumb to a dilution of from 1 to 100,000 to 1 to 500,000. As with the algæ, the colloidal solutions are immensely more potent than solutions of the copper salts. Of the salts the sulphate proves the most actively destructive, possibly because of its solubility. Mercuric chloride is but slightly more fatal to typhoid germs than copper sulphate. Carbolic acid, thymol, formalin, naphthaline, sulpho-carbolate of zinc and other accepted antiseptics take low rank in comparison.

These facts, together with a knowledge of the mild toxicity to the human family, suggest at once the possible value of the drug in the treatment of typhoid fever. Experience teaches that a six per cent solution of the salt is the most convenient. Remembering that copper is notoriously liable to be contaminated with arsenic, care must be taken to procure a perfectly pure drug. Beginning early in the disease, two drops of this solution diluted in one-half glass of water should be given hourly. An occasional sensitive stomach will call for a reduction of the dose to one drop. One drop will contain about one-sixteenth of a grain. If the tongue becomes dry, the dilution may be slightly acidulated with aromatic sulphuric acid. If the breath becomes foul, moderate doses of baptisia will prove useful. Patients should be continued on the treatment until convalescence is well established, when the drug may be stopped and small doses of strychnine substituted. During convalescence the pulse rate will frequently be found subnormal. This is probably due to the action of the copper on the nervous system and need cause no alarm. The same phenomenon is often very marked in cases treated with sulpho-carbolate of zinc. Both drugs act as a sedative to the nerves. When cases are seen early, before there is marked degree of intestinal ulceration, the use of large colonic flushings containing from five to ten grains of copper sulphate to the quart prove of very great value in shortening and lightening the course of the disease. The writer has seen such decided results that he can speak with much confidence. Good judgment must be exercised in this as well as in any other treatment. The patient's hips should be slightly elevated and the solution be allowed to enter slowly. Two quarts should be used hourly for several days. After retaining the enema for five or ten minutes, the patient may relieve himself, using a bed pan. Should the treatment irritate the bowel, reduce the drug strength, or use once in two hours instead of hourly. It is my custom to use the remedy thus for three days, then use once in three hours for several days, after which the intervals between are gradually lengthened until once daily yields to non-use.

During the autumn and winter of 1906 and 1907 fifteen cases of typhoid fever were treated with copper, all of whom recovered. Six of these cases were treated in St. Elizabeth Hospital, and nine in private families. The youngest was nine years old and the eldest thirty-seven. One was a case of walking typhoid. The six hospital cases came from a railroad construction camp and, with the exception of two, were well advanced in the disease

when admitted. The railroad cases were of a bad type, patients being delirious and in several instances having hemorrhages. Cases in private practice were seen much earlier in the disease, ran a milder course, convalesced sooner, and on the whole presented more gratifying results. Two of the hospital cases received the colonic flushings above referred to in addition to the remedy per orem. Bowel washings were omitted in the other four cases, because of great abdominal tenderness and very evident profound ulceration. Eight of the cases in private practice received injections. In one family having two cases, one patient was already in the course of the second week of the disease when first seen. The second case coming under treatment early, was treated by flushings and convalesced at the end of two weeks, after running a comparatively mild course. Another young man of eighteen who had been ill one week when first seen and whose case was typical in point of prodrome and beginnings, had a normal temperature at the end of fifteen days. The last case treated was a girl of ten years who, at the end of two weeks, presented a normal temperature. This case received colonic flushings three times a day only, owing to the fact that she was rebellious, and was treated throughout by reduced copper in the place of copper sulphate solution. A trituration was made with sugar of milk, representing one five-hundredths of a grain of copper to one grain of sugar of milk. Of this ten grains was administered hourly during the day, the doses being reduced as the patient improved.

Diet in all of these cases was, in the main, buttermilk. At no time was sweet milk given. Skimmed and strained soups were used, particularly tomato soup. The juice of ripe tomatoes, expressed and strained, was given to such as liked it, in quantities of from one-half to one wineglassful a number of times daily. As the case convalesced, tapioca was gradually added to the diet. The nurses were instructed to insist that the patient partook of goodly quantities of water. If the tongue became dry, a few drops of diluted hydrochloric acid was added to the water, which proved very grateful to the patient. When the temperature had been normal one week, the diet was carefully changed into semi-solid foods, and later on into the food of health. These cases, in addition to forty-three reported in the *Western Medical Review*, November, 1906, make a total of fifty-eight cases treated on the copper plan, with one death. The patient who died was very far advanced in syphilis, so much so as to make recovery impossible under any circumstance.

It would seem that this list serves to establish the fact that copper is one of our most reliable remedies in the treatment of typhoid fever. Like other remedies, however, it must be used with good sense and every possible chance given the patient in all ways for recovery. Absolute quiet, absolute rest, careful nursing, constant attention to details, are all necessary. Without these, failure must usually come in the treatment of any serious disorder.

The case in which reduced copper was used instead of one of the salts, proved particularly happy in the outcome. So much so, as to suggest further study and trial in this direction.

[Written for the MEDICAL BRIEF.]

Points to be Kept in Mind in Connection with the Administration of Chloroform and Ether as Anesthetics.

BY H. J. H. HOEVE, M. D.,
Professor of Anatomy in Drake University College of Medicine.
Des Moines, Iowa.

In many private cases, and even in a great many hospitals, an observant eye finds at once that the examination of patients regarding the determination of the anesthetic to be employed, is frequently limited to auscultation of the heart of the patient and a nodding of the head of the examining physician. The urine examination is slighted in many cases, as though it were of no import to know whether chloroform or ether should be used. Because of the laxity in examination in regard to selecting the proper anesthetic I have prepared the following classification:

Chloroform, and not ether, should be used in the following cases:

1. In affections of the respiratory organs, where ether would cause too much

irritation. 2. In nephritis. 3. In labor cases. 4. For children. 5. Cases on the battlefield. 6. In hot climates. 7. Cases where actual cauterization is necessary. 8. In abdominal sections, if the bowels are distended with gas, and where coughing and vomiting, which are more frequent with ether, must be prevented.

Never use chloroform for a second anesthetic within a week from the first administration.

Ether should be used as follows:

It should always be preferred, wherever possible, except at the induction of narcosis.

One of the main points in classifying cases is to remember that ether is much more irritating than chloroform, and consequently produces a more abundant secretion from the mucous membranes. It may also produce an irritation of the stomach through the saturated saliva. The fact that ether possesses greater power to irritate is proved by the fact that it requires but five per cent of air to properly dilute it for anesthesia, while chloroform requires ninety-five per cent of air.

Preparation of patient. (Bryant.)

Make an examination of the patient from top to toe.

Examine the secretions.

Make a record of the pulse and respiration.

No food six to eight hours before operation, except a glass of milk.

Remove false teeth, if there are any.

Loosen everything that constricts the body anywhere.

Cause the evacuation of the bladder and rectum.

Have enough fresh air in the operating room.

Relieve patient's fear.

If, during an emergency, an anesthetic must be administered without emptying the stomach, then the best thing to do is to pass the stomach tube after the patient is under the anesthetic.

All constriction should be removed, as the heart will have enough work, and any pressure upon the capillaries in different areas would impede the circulation greatly.

Position.—The horizontal position is necessary. The head should be on a level with the body, and if the patient should insist upon a pillow, it must be removed as soon as the anesthetic begins to take effect. A small roll may be placed under the shoulders and neck to free the respiratory passage.

The teeth of the manible should be kept anterior to those of the upper jaw. This is accomplished by pressing the manible forwards. This frees the larynx. It is impossible in this position for the tongue to fall back upon the epiglottis. The points to be kept in mind now are:

(*a*) Allay the patient's fear.

(*b*) Take care of his comfort.

When a patient holds himself down by his will power, he will struggle as soon as his will power is anesthetized. In order to allay his fear, it may be well to give a little morphine and atropin hypodermically. In some cases one-half to one ounce of whisky may be administered. The patient should be kept as dry as possible. Attention should be paid to the position of the extremities. Paralysis has been caused in not a few cases by permitting the extremities to rest on the edge of the table. The arms should be drawn up to the shoulders; the nose and lips should be anointed with vaseline or cold cream in order to prevent irritation; the eyes should be covered by a towel for the same reason. If the head is turned to one side the saliva accumulates in the cheek on that side, and can easily be wiped out by means of a piece of gauze.

The temperature should be carefully watched, as the anesthetic has a tendency to decrease it. The patient should be kept well covered.

The anesthetizer has absolutely no business to watch the operation; if he attends to his duties properly he has no time for anything else.

Chloroform is nearly always used to begin the anesthesia, if it can be had. Nitrous oxide serves the same purpose, and is probably better. It requires a great deal of judgment in the first stage as to the concentration of the vapor.

In administering the ether the cone is first held a few inches away from the face, permitting greater dilution; so, when the cone is placed down squarely upon the face, the patient breathes in the natural way; not quicker than normal. As soon as the respiration is normal the anesthetic

may be pushed. The maximum dose of chloroform to be used is sixty minims a minute, the usual dose is twelve minims, and the minimum dose six minims a minute.

When the respiration becomes irregular, it is necessary to dilute the vapor by lifting the cone. This is also necessary when the patient holds his breath on account of the deep inspiration, which will shortly follow.

Involuntary muscular contractions are frequently present. If there are struggles, the mask must be partly removed on account of the danger of heart paralysis. In the first period the anesthetic is given very slowly; in the second, push it, and in the third period be very careful.

During the second period, semi-consciousness, the patient has lost control over his muscles, but the reflexes are still present. In cases of confinement, colic, or reduction of dislocations, it is not necessary to push the anesthetic further, but from statistics it is dangerous to operate at this stage, because the reflexes are still present, and a reflex might cause paralysis of the heart. If semi-consciousness is required; as in confinement, no more anesthetic is used until the patient begins to move. This is the dividing line in reality, between surgical anesthesia and semi-anesthesia.

The Most Valuable Reflexes:

1. Pharyngeal—swallowing movements.
2. Conjunctival—touching the lower margin of the upper eyelid.
3. Deep pupillary reflex.

1. The pharyngeal reflex is due to ether vapor irritating the back of the pharynx, and the swallowing movement are the results.

2. In order to obtain the conjunctival reflex, pull the upper eyelid upwards, and touch the lower margin, the result will be wrinkling of the lower eyelid.

Remember, then, that as long as the reflexes are present, the patient is not ready for operation. If the eyes should resist opening, then you do not have to test for the conjunctival reflex. It is a fact that the eye muscles are affected very late, and as soon as they are affected the patient is ready for operation.

A good way to avoid vomiting is to give enough ether to have the pupils a little dilated. The chief indication that the patient is too deeply anesthetized is heavy snoring; this is due to paralysis of the soft palate. There are certain signs, called danger signs, which indicate that the patient is too deeply anesthetized.

Danger Signs:

1. In connection with the pupil.
2. In connection with the respiration.
3. In connection with the pulse.
4. In connection with the skin.

1. Withdraw the anesthetic at once if the pupil is dilating, and the superficial reflexes do not return.

2. Watch the respiration carefully; if it is bad, compress the epigastric region a few times, the patient will respond with a deep inspiration, and the danger is passed.

The pulse does not always become irregular before it increases in rapidity. If it runs up to one hundred and forty or one hundred and fifty, then it is necessary to use pilocarpinæ hydrochloras, 1/40-grain, hypodermically, or if this is not successful, salt solution.

The respiration must be carefully watched. If artificial respiration is induced immediately after the cessation of the respiratory centers, the chances, according to some good authorities, are ninety-nine out of a hundred that the patient will recover.

In giving an anesthetic it must be remembered that the patient is nearer death than life. He may die at any time, after a few whiffs, or after the operation is over. Probably the most frequent cause of death is the early paralysis of the heart. This occurs before complete insensibility has set in, and is usually due to concentrated vapor reaching the heart. If the patient has been struggling, the next few inspirations being much deeper than the rest, will saturate the blood to the utmost, and the blood passing into the heart reaches the coronary arteries, and the heart stops reflexly. The same condition may also be brought about by irritation of the mucous membrane of the nose. It is the result of too great irritation of the vagus nerve, resulting in reflex inhibition, but the same kind of irritation may cause the heart to start again. Therefore, the point is to prevent too much irritation of the respiratory tract.

The late paralysis which sometimes occurs, is due to the weakened condition of the centers in the medulla, whenever an operation lasts a few hours. The vaso-motor center is the first to stop, and the last is the respiratory center. When the vaso-motor center is stopped, all the vessels relax, and the blood goes through the arteries into the veins. This, of course, might cause death by cutting off the blood to the respiratory centers, or it might be due to direct poisoning of the respiratory center, but in most cases it is due to anemia. This is also the reason why a patient should not be anesthetized in the sitting position.

Routine treatment for vaso-motor paralysis:

1. Inversion of the body.
2. Mechanical excitation of the heart.
3. Thermal excitation of the heart and vessels.
4. Chemical excitation of the heart and vessels.

1. Invert the table, permitting the patient's legs to hang over the foot end; the knees will form a firm hold. This does not bring the blood in the heart back to the brain, but that which is in the veins below the diaphragm into the right auricle, and a contraction follows.

2. Pressing the region over the heart at the rate of about one hundred and twenty a minute.

(*b*) Squeezing the heart between chest wall and ribs (hand under ribs).

(*c*) If possible, take hold of the heart itself.

(*d*) Incision over heart, and pressing upon the heart itself.

(*e*) Aspirating the contents of the right ventricle.

3. Steaming hot cloths, towels, or the like over the pericardium, at the same time rectal injections of hot normal salt solution (120° F.). It may be given intravenously at the same temperature. The result is the same—a contraction of the involuntary muscles and the vessels.

4. Intra-venous injections of ammonia, 15/20 m., and four times as much H_2O every fifteen minutes, because the action of the ammonia is very fleeting, as it is destroyed in the liver. Strychnin might be used also, followed up with digitalis.

Routine treatment of respiratory Failure:

1. Mouth open and tongue pulled forward to clear the passage.
2. Head to one side of the body, a little lower than the body.
3. Artificial respiration.
4. Rhythmic contraction of the tongue.
5. Hot injections into rectum and veins.
6. Drugs.

The remedies for respiratory failure depend mainly upon:

1. Reflex stimulation of the respiratory centers.
2. Direct irritation of the respiratory tract.

Reflex stimulation of the respiratory Centers:

1. Rhythmic contraction of the tongue.

(*b*) Dashing a little ether upon the bare abdomen.

(*c*) Slapping the chest with a towel wrung out of ice-cold water.

(*d*) Stretching of the sphincter ani (the most painful procedure).

Ordinary compression of the chest is sometimes followed by an inspiration. In the larger hospitals a tank with oxygen is mostly at hand, and ready for use.

It is important to hear or feel the current of air from the nose. If this is impossible, the nose may be occluded, in which case the mouth is opened, and if this does not relieve the condition, the tongue forceps must be used. Failing of relief, a finger is placed in the larynx. If this is not successful, the patient is inverted. If all of this is unsuccessful, a sub-hyoid laryngotomy may be indicated. The trachea might now be cleaned by means of a small rubber catheter passed in through the artificial opening, and the contents withdrawn.

1505 West Ninth Street.

A Progressive College.

We are pleased to record the fact that the College of Physicians and Surgeons, of Dallas, Tex., under the able management of Dr. Arthur C. Bell, its dean, has purchased a new home for the college, and have a plot 150x150 feet, and surrounded by beautiful grounds. All the appointments will be of the latest style. We wish the college the success it merits.

[Written for the MEDICAL BRIEF.]

Chronic Inflammation of the Pharyngeal Tonsil as a Factor in Otitis Media.

BY WILLIAM R. MURRAY, PH. B., M. D.,

Clinical Professor Rhinology and Laryngology in the University of Minnesota; Attending Surgeon Nose and Throat Department Asbury and City Hospitals; Consulting Oculist and Aurist Swedish Hospital, Etc.
Minneapolis, Minn.

It is not my intention in the brief space that has been assigned to me to refer to those well-marked cases of adenoid growths which are so prevalent during childhood, and which, fortunately, are so promptly recognized by the profession. But I refer to another class of chronic inflammations of the pharyngeal tonsil, frequently present in adults as well as in children, in which the adenoid tissue is not hypertrophied sufficiently to cause any marked obstruction to breathing, but which may be so situated latterly in the naso-pharynx as to encroach upon the orifices of the eustachian tubes, or which may be situated in the median line, and during periods of slight congestion encroach upon the eustachian tubes, thereby causing a salpingitis or an otitis media.

This form of glandular hypertrophy may be present as a result of a more marked form of adenoid obstruction which is so frequently present during childhood, or it may have existed as a chronic inflammation without having given rise to any symptoms of obstruction. The most marked symptom of which the patient will complain is a post-nasal discharge, usually accompanied by more or less hawking and spitting in the efforts to clear the throat from accumulated discharge, or an occasional feeling of fullness in the ears, accompanied by more or less deafness, due to the encroachment of the hypertrophied tonsil upon the eustachian tubes, or due to the presence of the post-nasal discharge in the region of the orifices of the tubes, which in turn gives rise to an acute, subacute or chronic catarrhal involvement of the tubes, and is extremely liable to cause a similar involvement of the middle ear, giving rise to an acute catarrhal or purulent otitis media, or middle-ear involvement may progress more insidiously, resulting in a chronic catarrhal otitis media.

As the source of involvement in middle ear and eustachian catarrh is usually due to some abnormal condition within the nose or naso-pharynx, it follows that we can hope for no permanent improvement of the aural condition until such causative factors have been removed, and in the presence of a middle ear or eustachian catarrh in which the etiological factor is the presence of a chronically inflamed pharyngeal tonsil, our efforts will be directed primarily to the removal of the hypertrophied gland, and secondarily to the correction of such changes as may have taken place within the middle ear or tubes, by such treatment, local and general, as may be indicated in each individual case.

Pillsbury Building.

[Written for the MEDICAL BRIEF.]

Electric Lavage in the Treatment of Intestinal Obstruction.

BY A. P. CONDON, M. D.,

Professor of Surgery, Creighton Medical College; Surgeon to St. Joseph and Wise Memorial Hospitals.
Omaha, Neb.

I know of no condition arising in the practice of medicine in which so much depends upon the good judgment and prompt action of the physician as intestinal obstruction. He must not only be capable of appreciating the importance of the situation and the necessity of immediate interference, but he must also have the moral stamina to do a laparotomy when the indications are imperative and the life of the individual is in jeopardy.

The therapeutic measures should be confined to those which require but little time for their action; for we must keep in mind that it is the stercoremic intoxication which causes the collapse and which puts the individual in such an unfavorable state for operative procedure, and each hour of waiting lessens his chances for recovery from a laparotomy.

To my mind, the therapeutic measures to be used in acute obstruction, should be

limited to enteroclysis, the insufflation of air per rectum, and electric lavage.

Electric lavage has been much used in the hospitals of France, but has not been extensively employed in this country; it is not mentioned in our text-books on medicine or surgery.

"Electric lavage is a procedure of electrization of the intestines by means of which one tries to reinforce or to awaken the peristaltic contractions, in view of re-establishing the course of the interrupted intestinal contents, and which consists, essentially, in utilizing a quantity of water as an intestinal electrode."

I was first impressed with the advantages of this form of treatment in the clinic of Professor Boudet, of Paris, to whom is due the credit of its modern use and most of the statistics concerning the results obtained. It is not a new therapeutic agent, for even as far back as the early part of the last century we have a record of its use by Baillie, a London physician. In 1826 Leroy d'Etiolles presented to the Academy of Medicine in Paris a memoir upon the application of galvanism in the treatment of internal strangulation. Duchenne, in 1851, reported the first cure of a case of acute obstruction following the application of electricity to the intestinal canal. This, like many another medical acquirement, was not much employed and but little investigated until within the past two decades.

Physiological experiments have proved that the galvanic current is the better to employ to produce contractions of the muscular coat of the intestines. In a healthy individual, strong contractions can be caused by the faradic, but when the contractibility of the intestines has been lessened, the faradic current does not exert the same action, owing to the interruptions in the current; the effect is, therefore, fleeting and not of sufficient power to cause marked contractions, so that better and more permanent results are obtained from galvanization or an uninterrupted current.

The appliances needed for the employment of electric lavage are simple. A galvanic battery, capable of giving a milliamperage of fifty; two good conductors; one large or two small abdominal pads covered with chamois skin; a curved rectal electrode about four or five inches long enclosed in a rubber sheath to protect the mucous membrane of the rectum. It is well to have a large and small electrode, one for adults and one for children. The rectal electrode is attached to an irrigator or fountain syringe, holding from two to four quarts of warm water, containing one-half saturated solution of salt.

The rectal electrode is introduced slowly and without too much force as far as possible into the rectum. After being well inserted, the water is allowed to flow in very slowly; if injected too rapidly the rectum may contract, expelling both the water and tube. During the injection gentle abdominal massage should be applied. When a pint has been introduced the abdominal pad is placed upon the abdomen and connected to the negative pole of the battery, while the positive pole is attached to the rectal electrode.

Begin with a few milliamperes of the current and gradually increase to forty or fifty if necessary to produce active peristalsis; however, it seldom takes more than thirty. During this time the water is still flowing slowly into the bowel.

A single application should last from five to twenty minutes, according to the manner in which the patient retains it. At the end of five minutes the current can be reversed by bringing the indicator back to zero and then connecting the positive pole to the abdominal electrode and the negative to the rectal. The desire for defecation and the peristalsis may be so intense at the end of two or three minutes that one will have to desist in the operation.

The result of the injection may be a copious movement or the water may come away but slightly colored, followed by the expulsion of gas. The expulsion of gas shows that there is a permeability of the intestine, providing that it be passed in large amount and should have a foul smell, otherwise one might think that the air has been introduced with the water, which sometimes is the case.

The number of the injections to be given depends upon whether the obstruction be acute or chronic. When acute and the state of the patient is grave, after one thorough application without success, a laparotomy should at once be per-

formed. In cases of chronic occlusion, where the conditions are not imperative, after three injections, at intervals of five or six hours, with no effect, surgical intervention is indicated. The result wished for in the treatment of ileus, is the rapid restoration of the permeability of the intestinal canal. I believe that we have in electric lavage a therapeutic agent which is capable of accomplishing this end in all cases in which the obstruction is due to insufficient tone or lack of contractibility, and where by the inducing of active peristalsis the occlusion can be overcome.

Electric lavage is of much service in cases of chronic obstruction; it is of value in the obstipation that is observed in some insane, hysterics and general paralytics, and in all cases of chronic constipation.

If an occlusion has existed long and there is a possibility of gangrene or a perforation of the bowel, no time should be lost in opening the abdomen.

In every case of intestinal obstruction the first thing, if possible, is to determine its etiology, and if the cause is one that can be overcome by peristalsis, then electric lavage should be tried.

300 Bee Building.

[Written for the MEDICAL BRIEF.]

The Injection Treatment of Syphilis.

BY J. W. HANDLY, M. D.,

Professor Venereal Diseases, Vanderbilt University, Medical Department.
Nashville, Tenn.

The present day of advancement in the various departments of medicine carries with it a corresponding advancement in care and cure of that once most formidable disease, syphilis, so that now the horrors once pictured to the unfortunates of lust and passion are greatly minimized and encouragement, heretofore unknown, can be offered them with such assurance that aside from the inconvenience of the long treatment their minds are at ease.

We, as syphilologists, are anxiously awaiting the discovery of an antitoxin which will shorten the existence of the disease and probably prevent the same after a suspicious intercourse. Diphtheria and tetanus have, to a great degree, been bereft of their fatal terminations. Variola has been averted, and late literature indicates that the gonococcus serum will soon find its way into the hands of those skilled in the investigation of preventive medicine along this line. Until these serum antitoxins are perfected, we shall have to be content to use the means at hand for the cure of our patients.

One year ago I read a paper before the Tennessee State Medical Association on the treatment of syphilis, in which I outlined a most convenient treatment, per orem, by a line of quickly soluble tablets, which I have used for several years with much satisfaction, and to-day am using in many cases which can not be treated at regular intervals at my office. During the past year I have used hypodermatic medication with much satisfaction. Prior to this time I had used the soluble mercurial salts by intermuscular injection, after formulas suggested by noted syphilologists, and on account of frequent abscesses, muscular lumps and muscular soreness and stiffness aside from the pain caused by the injection, I had abandoned it. The deep injection of calomel suggested and used by these men was tried and discarded.

Since I have been using the salicylate of mercury suspended in benzoinol, after suggestions by Gottheil, my most sanguine hopes have been realized, my results most gratifying. My method of using this form of treatment does not differ materially from that laid down in the various text-books, but the success I have attained is due to closely observing the effects of the mercury, increasing or reducing or discontinuing as symptoms indicate.

A specially devised syringe without packing, glass barrel with minim marks on same one to ten and a half dozen long needles should be employed in administering the mercury suspension. The buttock must be scrubbed with soap and corrosive sublimate solution, while the needle is passed through an alcohol flame to sterilize it. The fleshy part of the buttock, at a point internal to the course of the sciatic nerve, is selected for injection. The syringe should be disconnected from

the needle to allow regurgitation in the event we have punctured a vein. To insert the oily suspension into a vein has caused syncope and other cerebral or cardiac or pulmonary disturbances. Muscular resistance to the introduction of oily mass would assure us that no vein has been entered. After withdrawal of the needle the part is sealed with collodion.

Now as to the dose. This varies from three-tenths grain to one and seven-tenths grain of the salicylate of mercury, according to the apparent needs of the patient, while the interval of treatment varies from three to seven days. It is advisable not to use the same buttock twice in succession, nor the same one if inflammatory lumps are present as the result of previous injection.

I would also suggest a rest from treatment after a period of two months, watching the case for reappearance of any symptoms. These cases frequently pick up in weight after the discontinuance of the mercury, especially when the iodide of potash is given to stimulate the glandular structures. Ptyalism is rare, yet the gums are sometimes touched by one-grain doses given at five-day intervals. I do not hesitate to commence the treatment as soon as the true chancre appears and in the cases so treated the secondary symptoms have been so light as to be almost unnoticed.

The appearance of the spirochæta pallida in the serum is sufficient evidence of the true nature of the trouble and justifies the immediate use of the antisyphilitic treatment without fear of a mistaken diagnosis. The idea of waiting for secondary lesions to appear before commencing treatment has now been abandoned. Why let the whole system become saturated with and depleted by the disease during a period of six weeks when we have positive means at hand to clear our diagnosis? At best we are delayed too long in bringing back the lost hemoglobins and diminished red-blood globules. Commence treatment as soon as possible and push it to tolerance, but not too much. Mercury in excessive doses produces similar results to that of syphilis—in moderate doses it combats the disease. Hence I reassert the closest scrutiny must be observed in arriving at a proper dose of each patient; the dose that will add flesh, strength and good color; the dose that will restore the hemoglobins and red-blood globules. I have seen mucous patches disappear from the mouth after a week's treatment with only two injections of one grain each of the salicylate of mercury. Semi-weekly doses continued prevented any return of them and general improvement to follow.

At times they complain of pain lasting a day or two after the injection. This can be accounted for by the possibility that some branch of the large nerves was punctured. It is my opinion that the injection treatment is far preferable to any other in lesions of the eye, nose or throat where active treatment is called for. Use a grain every second day until you see signs of ptyalism. Add to this increasing doses of the iodides for rapid assimilation and elimination. Brain and cord lesions can be reached by the same line of treatment, and especially in late lesions, where the iodides have relieved the gumma, will this form of mercury prevent their return.

Again, where the gastro-intestinal tract is peculiarly susceptible to disturbance by mercury or where delicate skin will not allow frequent application of the inunction or where domestic relations prevent the regular use of either, will the injection treatment come most satisfactorily to hand. By this line of treatment we are enabled to see our patients frequently, watch them closely and be able to combat quickly any symptoms that may arise. There are no nauseating solutions to upset the stomach nor no dermatitis to arise from the inunction. Patients can not dictate to themselves when they shall come to see the doctor, as is often the case in the treatment by tablets or pills, but we can dictate to them. We can keep them alive to the necessity of regular treatment, so that when all symptoms disappear they, too, will not disappear. Many of my patients prefer the injections to any other form, and feel lost without them.

Doctors, get you a syringe and get busy. You, too, will be pleased with your results.

714 First National Bank Building.

[Written for the MEDICAL BRIEF.]

Hot Water in Surgery.

BY HUGH WILKINSON, M. D.,

Professor of Clinical Surgery in the University of Kansas Medical College; Surgical Staff of Bethany Hospital, Kansas City, Kan.: Assistant Physician to St. Margaret's Hospital, Etc.: Kansas City, Kan.

The use of hot water in my surgical work has been so successful, or at least beneficial in so many instances, that I have chosen it as the subject of this brief article. Such a cheap, easily obtained and applied remedy needs more careful and frequent use. It is true that we are taught by many that in early inflammations cold water is equally beneficial, but I have obtained good results more frequently from the heated water thoroughly used. The cold merely relieves or prevents the congestion in the parts, and anesthetizes the nerve filaments, and is of value, if at all, only in the earliest stages of inflammation. Hot water, on the other hand, stimulates all the local human elements in the fight between the tissues and the inflammation producers. It brings more blood to the part, stimulates in place of depressing the vascular elements, and augments elimination and destruction of germs and their poisons.

In the application of hot water, great and minute care should be taken in its application. In instructing a patient about the care of an ulcer of the leg, for instance, or some chancroidal lesion, a felon, or any infection of the hand, it is a common custom to advise them to "soak the part in hot or warm water," leaving him to guess the rest. What does he do? He goes home, warms some water, and merely bathes the part, or allows it to lie a few minutes in the (probably) lukewarm fluid, and ends the procedure. No results can be accomplished from such treatment. In the instructions to his patient, he should be carefully detailed as to them. In ordinarily severe cases, I tell them to secure an ample-sized and shaped container for the part to be treated, heat a quantity of water, and submerge the part for at least fifteen or twenty minutes every three or four hours. The water should be as hot as can be borne, and when partially cooled more hot water should be added to bring it to the necessary temperature. In very severe affections, as a bad infection of the hand, or a spreading chancroid of the genitals with, perhaps, phimosis, the treatment should be repeated every hour or two.

I am aware that this is difficult to secure from many patients, especially among the lower classes, but by strongly urging them regarding its necessity we can often "scare" them into its observance.

I am speaking of hot water alone. In many of these cases the addition of some mild antiseptic seems to increase the efficiency of the treatment, especially in open infections.

The cases in which hot water, as above recommended, do good are too numerous and various to mention. In my work it has been more markedly beneficial in the class of cases mentioned above, to say nothing of sprains, old and recent contusions and swelling, and inflammation after fractures.

In gynecological work the hot douche and hot sitz bath are well-known measures, but should have a more thorough and detailed application than is commonly given them.

The use of cataplasma kaoli and its many proprietary substitutes have been greatly over-estimated as to value. Hot water as suggested here will give results time and again where the mud preparations fail.

311-312 Husted Building.

[Written for the MEDICAL BRIEF.]

Meningitis.

BY H. M. LUFKIN, M. D.,

Professor of Clinical Medicine and Physical Diagnosis in the Homeopathic Medical College of the University of Minnesota. St. Paul, Minn.

The most common form of disease of the membranes of the brain is meningitis.

The dura mater is much less frequently affected by inflammation than is the pia mater. An inflammation of the dura mater, or pachymeningitis, as it is called,

is most frequently the result of traumatism or specific disease.

Inflammation of the pia mater, or leptomeningitis, presents the clinical variety of meningitis most commonly met with. Meningitis is so varied in its clinical manifestations that a dividing line can not be sharply drawn as to the exact location of the inflammation, the exact pathology or symptoms. For example, tubercular meningitis and simple meningitis, and even the infectious meningitis may be so closely allied in their symptoms and clinical manifestations as often to be indistinguishable one from the other, so that often we must fall back upon the etiology as the determining factor in the diagnosis. Not infrequently etiological factors may be so confusing as to render the diagnosis impossible until the late manifestations of the disease, or the necropsy. A typical case of either form of meningitis is, as a rule, not confusing, but typical cases of the text-book variety are rather the exception than the rule. The simple meningitis is so frequently a secondary affection that some authors hold that it is never idiopathic.

Non-tubercular meningitis, or simple meningitis, is either dry or exudative. This is a confusing pathological distinction, because, in some forms of tubercular meningitis we may meet with a purulent exudation.

Non-tubercular meningitis occurs at all ages, being rare during the first year of life, while the middle period of childhood is the age more commonly affected.

The most common form of non-tubercular meningitis, and that most typical, occurs as a result of trauma, or through direct extension of a local inflammation from a purulent otitis.

Some specific germ gives rise to the balance of cases met with. Of these the specific infectious diseases are the most frequent cause. These are scarlet fever, measles, erysipelas, pneumonia, typhoid fever, syphilis, and heat-stroke.

Pathology.—Pathologically two forms of non-tubercular meningitis may be distinguished. In the commoner forms the inflammation results in a general cell proliferation, resembling new connective tissue cells. It produces a dry, lusterless opaque membrane; or the inflammation may result in exudation of sero-fibrin and pus, into the meshes of the pia mater and along the walls of the blood vessels, in which case it is distinguished as the exudative form of meningitis.

The former variety is that which is seen most often clinically as complicating the acute infectious diseases.

The latter bespeaks a more serious form of inflammation, a deeper infection The exudation consists of serum, sero-fibrin or pus, and occurs in varying proportions so that the pathological designation of this form of disease would be either the serous form, the fibrinous or the purulent form, according as to which form of exudation predominates. The exudation varies from a small amount to sufficient to cause a marked compression of the convolutions of the brain.

The brain substance may show degenerative changes in the vicinity of the pathological lesion, the convex portion of the pia mater may be affected, or the base of the brain and upper portion of the spinal membranes may be involved.

The symptoms will vary according to the location, character and extent of the inflammation, as well as by the amount of the exudation present.

Symptoms.—As meningitis is commonly secondary to injury, or some other disease, its symptoms and course may be obscured by the special disease of which it is a complication. We see, occasionally, a child come down with active cerebral inflammation without apparent cause. The disease runs a rapid course, proving fatal in one or two to eight days. A careful search, however, will reveal some cause for the meningitis, which clearly removes it from the so-called idiopathic class. The symptoms do not vary, excepting in the acuteness of the attack, in apparent idiopathic cases, from those which can be distinctly traced to a primary cause.

As this disease is one which generally affects children, it is often impossible to gather etiological factors, such as falls, earache, a co-incident pneumonia, or any one of many causes which may appear simultaneously with the meningitis, and yet remain undiscovered.

The following case is one of the apparently idiopathic variety. A child, three years of age, showed in the morning some

indisposition, loss of appetite; was observed to hold the hands to his head as if suffering from headache. A slight rise of temperature caused the family to attribute the trouble to indigestion. Within a few hours the symptoms developed rapidly when the following condition presented: Flushed face, somnolence, twitching of the muscles of the arms and feet, rigidity of the neck, and repeated convulsions.

The temperature the first day did not exceed one hundred and two degrees; the second day temperature one hundred and three degrees; convulsions more frequent, consisting of tonic and clonic contractions of the muscles of the face and extremities, with marked retraction of the head. Beginning of third day there was a convulsive seizure lasting over a period of two hours, at which time I saw the case in consultation, when a temperature reaching the limit of the thermometer (one hundred and eight degrees), was noted. The child was unconscious; almost pulseless; face cyanotic. Cold baths reduced the temperature rapidly; convulsions subsided, and the child returned to consciousness for two or three hours, when increasing somnolence recurred, with repeated twitchings, final recurrence of uncontrollable convulsions and death.

Careful inquiry disclosed no possible cause for this attack of meningitis, yet, in all probability, the child, without the knowledge of his parents, had suffered some slight injury to the head.

The most notable feature of this case, aside from the source of the infection, was the remarkable high temperature, with subsidence of the convulsions, and return to consciousness.

Of the milder types the following will serve as an illustration. It represents the pathological lesion in the class case of acute non-tubercular meningitis: A baby six months old, had suffered several days from looseness of the bowels, characterized by stools green in color, containing curds and mucus. Some loss of appetite, and marked rise of temperature. On the third day temperature rose to one hundred and three; child became fretful and irritable. A general hyperesthesia developed so that it was impossible to touch or move the child without causing great pain and discomfort. It was found that light was objectionable, and movements of the head caused great pain. The bowel condition throughout the course of the disease was typical of a mild summer diarrhea, varying little from day to day. The fourth day, after a comfortable night, considerable edema of the face, hands and feet was noted. On the fifth day the temperature rose to one hundred and five degrees, retraction of the head became marked; some contractures of the feet were noted, reflexes all exaggerated; converging strabismus developed; a stroke of the pencil upon the abdomen produced a red, congested line (*tache cerebrale*) lasting five to seven minutes before fading. Food was refused. The next day temperature dropped to normal; stools less frequent; child noticed things for the first time without irritability. Cried, and could stand some light. Sixth, seventh and eighth day completed convalescence.

The mother of this child had had two pulmonary hemorrhages within the month; had tubercular deposits, abscesses of both lungs; was nursing the baby. The history of the mother led to grave apprehension of tubercular meningitis, although tubercular meningitis is rare during the first year of life.

The following case illustrates simple meningitis, following injury to the head, with deferred active inflammation: Child three years old. Mother a sufferer from Graves disease in advanced stage. (She died within the year of the baby's illness.) No tubercular history. Baby playing as usual, when she fell, striking her head; was very pale, and suffered some shock, and vomited once or twice, but was soon as well as ever. A week later the mother noted a vacant stare, lasting but a second, after which the baby became sleepy. A short nap seemed refreshing, only these attacks became more frequent, several occurring each day; each was followed by drowsiness. No rise of temperature, yet there developed unusual constipation and irritability. During the following month the child failed in nutrition; became gradually more irritable; shunned bright light, and slept poorly. The seizures, which were hardly noticeable at first, had become more pronounced and frequent; the eyes turned; one hand and arm became flexed

and rigid. The seizures would last two minutes, and were followed by stupor lasting an hour. The absence of fever and the transient character of the symptoms led to a diagnosis of epilepsy, the result of injury. Six weeks following the first attack the patient was seized with a general convulsion, lasting half an hour, followed by fever. The symptoms before noted as being only transient in association with the seizures now became permanent. There was marked rigidity and retraction of the neck, strabismus, photophobia, anorexia, marked *tache cerebrale*, reflexes all exaggerated; repeated convulsions, a gradually ascending temperature, rapid wasting, and death in ten days. Paralysis of the extremities of the left side indicated cerebral pressure. There was no autopsy, but this was evidently a meningitis of the exudative type.

As a noticeable contrast to this class of cases, I cite the following, which is fairly typical of the tubercular type:

Miss M., a young girl in her first year at high school; mother died of tuberculosis of the lungs soon after the child was born. The father was in good health, without tubercular history in his family. This girl is an only child. She had a sunny, sweet disposition, and is beloved by all who know her. She has never been well and strong. Caught cold easily, suffered with attacks of vertigo, etc.; had not been able to attend school regularly, but was in advance of children of her age, because of unusual precocity. She had the usual diseases of childhood, but always made an apparently good recovery. During the spring of 1905, while attending school she complained of being easily fatigued, then complained of headache. This condition was attributed by her parents to eye-strain. It was after this that her stepmother called at my office and called my attention to the condition which seemed to have existed for several weeks, until she had become somewhat worried. A prescription was given, with instructions to keep careful watch. The history of the case, the tuberculosis of the mother, and my knowledge of the child's general malnutrition, led to a suspicion of a beginning meningeal trouble. Two weeks later the mother returned, saying that the headaches had become unbearable, but yet did not wish me to see the child, as she thought that a rest from school would clear up the trouble. The following week I was called to see the child, and found her in bed suffering intensely from headache. Her face was flushed; eyes sensitive to light. She complained of pain in her limbs, inability to sleep, and a general hyperesthesia of all the senses. Her disposition, which had previously been of the mildest and most docile type, had changed to one of irritability. Yet the patient realized this, and after some sharp command, would apologize, and fall into tears for being so ungrateful and unappreciative of the attentions paid her. The following week there was slight change in the condition. Headaches failed to respond to treatment. Irritability increased. The skin, which was always pale, seemed waxen in color. A slight touch of the finger was usually followed by a red blush of congestion, which would last for several minutes. The reflexes now became exaggerated. This condition continued for another week without material change, while the headache persisted. The irritability would show periods of amelioration, and some sleep would be obtained; then again wakefulness, alternating with slight delirium. She could take no food, and when she did, especially liquid food, it was soon ejected with great force, without premature nausea. About this time marked rigidity of the neck developed, and it became impossible to move the patient in any way without causing incomparable agony. During the short time the patient slept there was more or less delirium of a passive type, followed by periods when she was rational. The pupils, up to this time, had remained normal; reacting to light, but now became irregular in outline, and one contracted more than the other. Slight twitchings, followed by contraction and rigidity of the feet and hands developed. The pulse, which, during the first part of the illness, was somewhat accelerated, one hundred and five to one hundred and fifteen, during the third week of the disease, became very much slower, and gradually developed irregularity and weakness. Unconsciousness supervened in the third week of the disease.

A period of amelioration took place about this time, when the patient became rational, talked freely to her parents, seemed to appreciate the gravity of her condition, met and talked with friends, predicted her possible death, and made some bequests. This period of apparent amelioration was followed shortly by complete unconsciousness and the development of the Cheyne-Stokes respiration; several convulsions of a mild type supervened, and the fourth week of the disease the patient died apparently from exhaustion.

A diagnosis of tubercular meningitis was made at autopsy. There was some slight dullness in upper lobe of lung.

In the main these cases present typical examples of their type, while some depart from the same. This case of tubercular meningitis is rather advanced in age, between three and ten years being the usual age in which we find this disease. To differentiate the various types of meningitis is often impossible. It is almost impossible to say before autopsy that a meningitis is of the purulent, exudative or tubercular purulent variety. Yet there are features of distinction which, with patience, and a careful analysis of the symptoms, will aid in diagnosis. The distinguishing points between non-tubercular and tubercular meningitis are: first, the etiology. Tubercular disease in some member of the family, or a distinct exposure to tubercular infection, the presence of tubercular glands or a tubercular deposit, or non-tubercular disease in the subject before the onset of the tuberculosis should be looked for. The non-tubercular variety presents an acute onset, and a generally rapid course; the pulse is rapid from the start, increasing in rapidity with early falling of the pulse. The respiration in the tubercular variety, is slow, very irregular in type, and develops the Cheyne-Stokes respiration later than the non-tubercular variety, in which we have rapid respiratory movements. The convulsive seizures in the tubercular variety are less marked, are slight in their manifestations, less general, as a rule, and appear later in the disease. Hyperesthesia of all the senses is variable, depending largely upon the amount of exudation present. While these differential points apply to many cases, the order of the development of the various symptoms may be such as to leave one in doubt for some time before a just estimate of their importance can be determined. Especially is this so in the non-tubercular variety, which has been preceded, or is accompanied by some infectious type of disease which it complicates. The meningitis being so altered by the symptoms of the primary infection as to render the diagnosis confusing. Tubercular meningitis is admittedly invariably fatal. Simple meningitis presents an unfavorable diagnosis in the majority of cases, yet we see many cases recover, often with permanent disability from local paralysis or degeneration of the brain substance, leaving the child a defective for life.

The treatment of either variety is purely symptomatic. Absolute quiet and rest should be secured and freedom from all sources of irritation. To accomplish this a trained nurse who thoroughly understands the requirements of the case is invaluable.

The type of remedy used in treatment is that which expends its main action upon the functions of the brain. Belladonna in the third attenuation, and aconite meet the early symptoms of congestion and cerebral excitement. Later, when delirium develops, stramonium is useful. The extreme irritability and early development of these cases, accompanied by constipation and vomiting, will often call for the use of nux vomica or bryonia. For the high temperature, cold baths and the ice cap are indispensable. The treatment after convalescence should be as carefully adjusted as during the onset of the disease; it sometimes requires months to restore the patient to a normal state of nutrition and nerve balance.

While the prognosis is always grave, it is never safe to predict a fatal issue, particularly is this so with young children, as their unstable nervous organisms are such that a slight irritation or a moderate dry meningitis may closely resemble a more serious type, and yet perfect recovery takes place.

Germania Life Building.

[Written for the MEDICAL BRIEF.]

Recto-Colonic Feeding.

BY CHARLES J. DRUECK, M. D.,
Proctologist to People's Hospital.
Chicago, Ill.

In presenting this paper I wish to state that I am not so enthusiastic as to suggest this method of alimentation as a substitute for the normal avenue of ingestion, but in the treatment of certain conditions it may be desirable, if not imperative, to relieve the stomach of all food for a time, and in these cases we may temporarily sustain the patient by introducing foods into the rectum and colon through the anus. It has long been recognized that all mucous membranes will absorb certain substances and pass them into the lymphatics, but only recently has this knowledge been applied to rectal feeding. Kelsey cites numerous authors who speak of the relative absorbing power of the colonic and gastric mucous membranes and a considerable proportion of them conclude with some such evasive statement as: "It is not wholly established yet, that sufficient nourishment may be absorbed by the mucosa of the rectum and sigmoid to sustain life." Bauer, for instance, states: "Not more than one-fourth of the necessary nutriment even under the best conditions can be absorbed from the rectum."

Such statements in the light of our present knowledge must be modified, because enemata must not be deposited in the rectum or sigmoid, and moreover experience has shown that many patients not only live but some even gain slightly in weight when the injections are carefully given according to the directions that appear later in this article. Thompson (*Practical Dietetics*) supported a patient seven weeks, and Flint (*N. Y. Med. Rec.*) refers to a patient who was nourished for fifteen months by rectal feeding alone and who had been maintained chiefly by this method for five years. These, of course, are extreme cases, but it is safe to state that any patient may be maintained for three or four weeks upon this artificial feeding exclusively, and this is sufficient to produce the desired results or tide the case over a crisis in many instances. Friedenwald and Ruhrah, in their book, state that an individual may be sustained four to seven weeks. It will be easily seen that the writers of fifteen years ago and to-day differ materially in their opinions as to what may be accomplished.

Feeding by way of the rectum has been objected to mainly on theoretical grounds of physiology, although I might add that in my experience the method of administration is often faulty. The rectum proper, that is the last six inches of the bowel, has very limited absorbing power, but Landois has shown that the colon has very marked assimilative power, although the digestive ferments are feeble. Thus properly prepared foods are readily absorbed and considerable nourishment thus derived.

Recognizing the fact that patients are nourished by foods administered per rectum and still maintaining that the secretions of the rectum have little digestive power, very peculiar theories have been advanced as to how assimilation is accomplished. Flint (Trans. N. Y. Acad. of Med.) says. when food comes in contact with the rectum while the stomach is empty, the gastric and intestinal juices descend to the rectum. Batty, by experiments on cadavers, concludes that the injected food ascends the whole digestive canal instead of remaining in the colon or rectum. He thus accounts for the phenomenon of patients being able to taste substances such as quinine or castor oil when given per rectum. C. W. Brown, of Washington (Food, Vol. 4, No. 8), cites a case where the patient was able to distinguish the taste of potassium iodide or ergot fifteen or thirty minutes after they were given per rectum, and accounts for it by rapid absorption and transmission through the blood to the taste bulbs and saliva. Voit and Bauer were the first to find that sodium chloride added to meat juice and peptones greatly increased their absorbability when used in enematas, but the salt stimulates reverse peristalsis to such an extent that many writers (Grützner and later Swiezuski) have been able to demonstrate in the stomach substances that had been administered per rectum.

INDICATIONS FOR RECTO COLONIC FEEDING.

1. Obstruction to the entrance of food into the alimentary canal, as by new growths, foreign bodies, inflammatory swellings of the mouth, pharynx or esophagus which may result from disease, corrosive poisons like carbolic acid, ammonia, or following operations upon these parts.

2. Inability to swallow food as during coma, delirium, post-diphtheric paralysis or in the presence of spasmodic conditions of the esophagus, also during acute insanity when food is refused by the mouth.

3. Gastric disturbances, such as acute gastritis, hyperchlorhydria, hypersecretion, gastric dilatation, ulcer or cancer when it may be desired to rest the stomach, also the reflex vomiting of pregnancy or seasickness.

4. Stricture of the lower digestive tract, but above the cecum.

5. Feeble digestion and when emaciation is increasing.

PRINCIPLES OF RECTO COLONIC FEEDING.

The minutest details are important and the enemata should always be given by the physician himself instead of intrusting it to a nurse, because the patient's life often depends on the treatment being carried out for some time. If the rectum becomes irritated, it usually means the suspension of the treatment, because only rarely can the feedings be withheld long enough to quiet the local trouble. Occasionally a patient will object to the feeding for esthetic reasons and the physician must use tact and persuasion. Before taking up the details of methods I desire to emphasize the following as being vital to the success of the treatment:

1. The rectum must be free from mucus or feces before giving the enema.

2. Any irritability of the rectum is to be relieved as quickly as possible.

3. The quantity and quality of food used should be carefully regulated to avoid peristalsis and to allow complete absorption of one injection before another is given.

ADMINISTRATION OF THE INJECTION.

The utmost care is necessary in the manipulations because irritation or injury to the rectum is inevitable if careless, rough or unskilled attempts are made. The exact condition of the rectum must be determined and explicit, written instructions given, when a nurse is intrusted with the work because failure often results from leaving this matter to persons ignorant of the anatomy and physiology of the parts and of the conditions that may arise or are to be observed.

At first the clysters may be rejected, but when properly prepared and administered the rectum in many instances soon acquires a tolerance and the nutrient enemata may be given in sufficient numbers and volume to support the patient for weeks. In all cases, proctitis is likely to arise and it is only a few favorable instances that irritation and diarrhea does not occur after several weeks. When this does happen the enemata must be stopped temporarily to be resumed after the bowel improves. All local troubles like ulceration, fissure, fistula and especially hemorrhoids are drawbacks. Great care must be maintained not to irritate the latter by rough usage of the catheter or syringe nozzle. The use of a soft, flexible catheter and a two per cent cocaine solution is imperative for such cases. I will mention the ordinary syringe with the short nozzle only to condemn it. For children, a number twelve or fourteen "velvet-eyed," flexible catheter may be used, but for adults, a full length rectal tube about one-half inch in diameter should be selected. The tube should be rigid enough to free itself and not bend or double, if it catches in a fold of mucous membrane, and yet must not be stiff enough to cause pain or damage when introduced. Sweet oil, butter or vaseline may be used as a lubricant, but not glycerin, as that excites peristalsis.

One of the first essentials for absorption by the colon is cleanliness within the bowel. It is very evident that if the colon or sigmoid are filled with feces or the membrane covered with mucus it is impossible for osmosis to occur. Therefore, before any nutrient is introduced the colon must be thoroughly emptied and cleansed. One hour before the time of giving the morning feeding the colon should be flushed with a high injection of one quart of normal salt solution, a return flow catheter being provided that the water may find easy exit and thus avoid

stimulating peristalsis. In many instances one such cleansing each day will be sufficient, but if much mucus is present it is well to precede each feeding with the cleansing injection, and in such cases the salt should be replaced by two teaspoonfuls of sodium bicarbonate. When the rectum is tender or inflamed a saturated solution of boric acid is best borne. This procedure washes out any undigested food or waste matter, cleanses the mucous membrane, stimulates the local circulation and thus provides better absorption.

The temperature of the solution used to flush the bowel is a matter of some difference of opinion. Tuttle recommends cold water because he finds tnat it acts more promptly and leaves the bowel more tolerant of the succeeding nutrient enema. My own preference, however, is for solutions nearly the body heat, as they cause less reaction, in other words, congestion of the mucosa. The nutrient enema being kept in contact with the tissues for a considerable time must necessarily induce some reaction, and if we, by any treatment, over-stimulate and thus irritate the colon, it promptly expels the whole contents and thus may unfavorably determine our case.

A very important point is to flush out the bowel some little time before giving the nutrient (in my practice I make this about one hour) and then allow the patient absolute rest in bed. A fountain syringe or an ordinary stomach tube and funnel may be used to fill the rectal tube. The apparatus must be tried before introducing to see that all is in working order. It is well to heat the appliances to about 100° F. to prevent chilling the enema before it is injected; fluids either too hot or too cold are promptly expelled. An enema at 90° to 95° F. is best retained. When everything is ready the tube is filled with the enema before introducing, to insure the exclusion of air, because air is very likely to stimulate peristalsis and evacuation.

The tube is introduced with a twisting or boring motion to avoid its becoming impacted in the folds of the mucous membrane. If it meets resistance, a little of the fluid is admitted and the rectum dilated or ballooned. After the tube has passed the sphincter (about four inches) it is allowed to rest a few minutes until the temporary excitement has subsided and during this rest any colonic gas that is present is frequently expelled. The tube is then advanced as high as possible to bring the fluid in contact with a large amount of mucous membrane and to lessen the tendency toward ejection. Some authors lay considerable stress on the anatomical arrangement of the circulation. The blood returned from the colon, sigmoid and superior hemorrhoidal veins enters the portal system, while that from the lower rectum, the inferior hemorrhoidal veins, enters the vena cava, so that substances absorbed by these latter veins do not go through the liver, but substances absorbed higher up pass through the vena porta to the liver and are there further elaborated. Be that as it may, the fact remains, that sugars introduced into the rectum do not cause glycosuria because the rectum has very little, if any, absorbing power and the food must pass up into the colon to be absorbed.

After the tube has been fully introduced the injection is allowed to run out very slowly, occupying fifteen minutes or more because rapid injection stimulates peristalsis. The bag should be held about two feet above the level of the patient's hips.

When the tube is nearly emptied and before any air has a chance to rush in after the injection, it is firmly compressed and slowly but steadily withdrawn. Then to aid retention, a soft, folded towel should be firmly pressed against the anus for twenty or thirty minutes. This reduces the temporary excitement and the tendency to evacuation. The patient should remain quiet for at least an hour and be instructed to try to retain the injection. Cheerful conversation by the doctor or attendant diverts the patient's mind and is of much assistance where there is a fear of expulsion.

POSITION OF PATIENT.

The position of the patient also assists, the left lateral prone with the hips raised on a pillow is usually sufficient, although if the patient is nervous or hysterical, it is well to use the knee-chest position. In gynecological or obstetrical cases where enemata are given, it must be remembered that tight vaginal tamponing interferes with absorption from the rectum.

The number of injections per diem depends on the irritability of the rectum and at the beginning should be one in eight or twelve hours. If after a couple of days the rectum is in good condition and it is necessary to give small enemata frequently, they may be repeated every six hours. However, frequent clysters usually irritate the rectum and have to be suspended soon.

OPIUM IN ENEMATA.

Opium in the form of laudanum (from three to twenty minims) may be added to the nutrient when irritation exists, but it must be remembered that though opium inhibits peristalsis and thus favors retention of the enema it also interferes with its absorption. Whenever it is given, its doses must be guarded and its action watched. If the nutrient enemata have been continued until the rectum is irritated, the opiate often acts better when injected into the rectum one-half to one hour before the enema. When administered in this way, the volume is so small that it acts locally before the larger, nutrient enema is given. The deodorized tincture of opium may be used instead of laudanum.

The presence of hemorrhoids is one of the most unfavorable handicaps to the treatment because they are so easily irritated and inflamed and thus set up spasmodic contractions of the sphincter. If they exist, they should be carefully painted with a two per cent solution of cocaine muriate just before each feeding and immediately after a mild astringent and sedative ointment should be used.

FOODSTUFFS USED IN RECTAL FEEDING.

Not all substances administered by mouth are available for colonic feeding. It is important to use only such substances for colonic foods as will be almost, if not wholly, absorbed, because all residue acts as foreign matter. It has been found that many albuminous foods, although absorbable, become irritants when given in too great a degree of concentration. Pure peptones, for example, must be diluted with two or three volumes of water or some bland vehicle. Some albumens, such as egg or that of chopped meat, may be absorbed by the colon undigested, but even these are better when partially pancreatized. Albumen is very slowly, if at all, diffusible, and must be previously changed into albumose. This may be accomplished easily by adding pepsin or pancreatic extract to the injection, either some time before administration, thus allowing digestion to take place outside the body, or mixing the digestive in the clyster just before giving it and allowing digestion to proceed within the bowel. Catillon, experimenting along this line on dogs, noted that the animal fed on unaltered egg lost weight and barely existed, while the one receiving eggs mixed with pepsin retained normal weight and apparent health. After thirty-seven days the pepsin was removed and the animal gradually lost weight. Plain starches are poorly absorbed from the rectum, but when partially converted into grape sugar are absorbed more readily.

FATS.

In the selection of a food for artificial feeding the caloric units which it contains is obviously important and it would appear, therefore, that fats and oils would be pre-eminent, yet clinically it is found that fats are not only not absorbed, but, when administered they tend to coat the mucosa and the food and thereby prevent absorption. This is most unfortunate because a given amount of fat produces twice the energy that the same amount of proteid or carbohydrate food does. Attempts have been made to saponify the fats before their administration and Edsall and Miller (of Philadelphia) have carried out some extensive experiments along this line, but were unable to find a soap that was soluble that did not contain so much from alkali as to make it markedly irritating to the bowel. The only other way of giving fats is in emulsions, but in using plain milk and yolk of egg it is found that the proteids entangle the fats in the coagulum and stop digestion. With artificial emulsions and with malted, peptonized or pancreatized milk much better results have been obtained. The advantage in these preparations is that the fat is very finely divided, and in such condition much more fat is absorbed than is usually credited. About one-half ounce of the powder mixed in five ounces of

saline solution is the average amount and is well absorbed without irritating the bowel. In the ordinary course of digestion, administering food by mouth, the fats are absorbed wholly by the villi of the small intestine and very little action normally takes place in the large bowel on fats.

EGGS.

Egg albumen is one of the best, if not the best, ingredient for rectal feeding and is absorbed even though unchanged when administered, but is better acted upon if predigested with peptogenic or pancreatic powder. Ewald says egg albumen unpeptonized is absorbed as readily as commercial peptone, while peptonized egg albumen is taken up with even greater facility. The addition of fifteen grains of table salt to each injection aids the absorptive power, though where the salt is used we occasionaly set up a reverse peristalsis. I wish to call your attention to what I have previously said, that in some cases we have sufficient retro-peristalsis to carry the food into the small bowel, and it is in these cases, I believe, where we have such happy results, in that the patient not only holds his own, but seems to improve in strength. The yolk of the egg is not used, because it contains so much fat mixed with the albumin as to be useless.

PANCREATIZED MEAT.

Pancreatic extract of some form may be used in preparing proteid food, but must be fresh, because it does not keep long, and if old may act as an irritant. Glycerin extracts of pancreas can not be used on account of the aperient action of the glycerin. Leube suggests the addition of one part fresh pancreas to three parts of fresh beef, as the best method. The pancreas and meat are finely minced and rubbed together into a paste with the addition of a little water. All fat must be carefully removed. Mayet suggests practically the same formula, but with the addition of one egg, and adds: "Mix and let stand two hours before administering." It is occasionally recommended to add Hcl. to beef solution and also to milk, but the acid is too irritating and all such artificial digestion must be carried on outside the body.

BLOOD.

Dried beef blood has been used as a rectal food, but is not practicable, for it usually clots within the rectum and prevents the absorption of other substances. Fresh, defibrinated blood has been used, but is not popular or satisfactory.

GLUCOSE.

Glucose is absorbed if diluted. If given in concentration it irritates the mucosa and stimulates expulsive peristalsis. Leube recommends three hundred cubic centimeters of a fifteen per cent solution as a maximum.

STIMULANTS.

I will call your attention to but two stimulants, namely, coffee and alcohol. There are times, especially in the immediate post-operative treatment, when it is desired to combat shock even more urgently than to give nourishment. A pint of good coffee (black) contains five to seven grains of caffeine and gives prompt and effective support. Whenever the stimulant is desired the pint of coffee may be substituted for the ordinary nutrient enema, and in this way may be used more liberally than alcohol because it is not so irritating; although, of course, all stimulants are really irritants and in protracted cases their frequent use renders the colon intolerant.

Alcohol in fifteen per cent dilution of good liquor stimulates the bowel and increases the absorbability of the proteids. One of the strong points in the use of liquid peptones, as they are offered in the market, is that they contain about that strength of alcohol, together with about eighteen per cent of carbohydrates and proteids. When added separately to the enema about one drachm of brandy or an ounce of red wine is enough. The Europeans prefer red wine because of its astringency. The alcohol should be added after digestion is completed in the mixture and just before its administration. Larger amounts of liquor are likely to irritate the bowel. Very often a small injection of one-half ounce of whisky, sherry or brandy in one and one-half ounces of water will be retained and absorbed, when larger quantities of fluid with the alcohol incorporated are expelled. Undiluted whisky added to milk some-

times causes a precipitate by coagulating the casein that is not pancreatized, and as no solid matter in even a fine precipitate is any use in the colon it simply acts as an irritant.

FORMULAE OF NUTRIENT ENEMA.

Having considered somewhat the kinds of foods that are applicable for artificial feeding, we must next combine them to suit our various needs because no one food will sustain life wholly, and the nutrient enema must combine proteid, carbohydrate and salt. I have had good success by using an injection of peptonized milk eight ounces, whites of three eggs and one-half teaspoonful of table salt for one feeding, and at the next injection using pancreatized meat eight ounces. About once every other day it is well to add two ounces of grape sugar to one feeding for its heat energy. By alternating these foods my patient receives all classes of foods in a readily absorbable form. In emergency cases, where we can not prepare these foods for each feeding, we may use one of the commercial beef peptone preparations in the proportion of one to two ounces of peptone solution and four ounces normal salt. Where these alcoholic mixtures are found to be too irritating, better results will be obtained by substituting malted milk, one ounce, and saline solution, five ounces. The formula of Ewald gives very good results where one recipe is to be used; it is: Beat the whites of two eggs with a tablespoonful of cold water, add one or two teaspoonfuls of boiled starch in one-half teacupful of twenty per cent glucose solution, a wineglassful of claret and a teaspoonful of peptone solution. Mix at a temperature below the coagulating point of the albumen.

The amount of nutrient injected each time must be determined in each case. Some patients can retain but three or four ounces. In such cases the clysters must be given more frequently, perhaps every four to six hours, while others will comfortably retain up to eight ounces and need not be fed oftener than every eight or twelve hours. When the enemata are given frequently it is always necessary to add some opiate, as the rectum is sure to become sensitive. In nearly all cases we must add opium after a week, and as the doses need frequently to be increased, it is well to begin with a small dose.

A large part of the success in this work depends upon familiarity with the method employed. I do not want to be misunderstood as implying that rectocolonic feeding can entirely replace the natural method of assimilation, but I do insist that in the proper class of cases, where a few days to four weeks may mean the saving of a life, this way of feeding will sustain the patient and in some instances even add to his weight. Hunger and thirst are often very annoying for a few days, but after that the patients are relatively comfortable, the tongue remains clean and moist, and the longings diminish.

I will call your attention to just one case. Mrs. B., aged thirty-five years, a Bohemian, housewife, was referred to me with a desperate case of gastric ulcer. Her pain was almost constant and even liquid foods caused agony and usually vomiting. She had lost so much strength that she had to be carried to the hospital. A sharp hemorrhage had existed the day before, but had practically subsided when I saw her. I deferred operation in her exhausted condition, and to relieve her urgent symptoms advised colonic alimentation. From the time I saw her she took nothing by mouth for one week and for the next three weeks that the treatment was continued only water was allowed. All nourishment was given per rectum. The first enema was a pint of strong black coffee and after that peptonized milk and egg alternated with pancreatized meat. Once every other day I added a little coffee or alcohol. The first day this woman begged for something to eat or drink, but after the second enema the pulse was perceptibly fuller and her cravings moderated. She was thirsty the whole first week, but when water was allowed I found that one pint per day kept her very comfortable. She had one hemorrhage on the third day of the treatment, but none after that. Her pain gradually subsided and when she was finally allowed a restricted diet she was in much better physical condition than when she entered the hospital, and even expressed a willingness to continue with

the enemata if I thought best. Several months later this patient returned of her own accord and said she was having some of the old pain and asked for further treatment. The gnawing pain disappeared in thirty-six hours, but the stomach was kept at rest for a week. The patient was seen again during the preparation of this article and says she has no symptoms of the old trouble. I report this case because it is not an extraordinary one, but on the contrary, is such as most of us meet very frequently and where the indications are clearly to put the stomach at rest.

599 East Forty-Sixth Street.

[Written for the MEDICAL BRIEF.]

A Case of Gangrene of the Foot Following Diabetes Mellitus and Arterio-Sclerosis.

BY FRANK WARNER, M. D.,

Professor of Operative and Clinical Surgery in the Starling Medical College.
Columbus, Ohio.

Recently I was called to see a case of gangrene of the foot in consultation with Dr. Clement, of Groveport, Ohio. The patient, a man sixty-three years of age, had been a farmer for many years, and had led a temperate and active life. Family and personal history good. Some years before he developed diabetes mellitus, from which he has been suffering. An examination of the urine showed five per cent of sugar; specific gravity, 1036.

Blood examination showed hemoglobin, eighty per cent; red corpuscles, four million five hundred and sixty thousand; white corpuscles, six thousand five hundred. The differentiation count of whites showed normal. The red corpuscles were well formed, barring occasional slight irregularities in conformation.

The gangrene involving the foot was of the moist variety. Two toes were black, and a discoloration extended along the plantar surface of the foot, half way from the toes to the heel. The foot itself was somewhat edematous, this edema extending even above the ankle.

It was seen at once that amputation was imperative, but whether to undertake this operation immediately with the high percentage of sugar in the urine, or to delay it until the percentage of sugar could be diminished, was a problem to be decided.

Another important question to be settled in my mind, when amputation should be done, was whether we should be content with sacrificing the foot alone, or, under the presumption that this gangrene was dependent upon a great amount of impingement of the arterial supply of blood to the foot—presuming that this arterial sclerosis resulted in a compromise of the caliber of the vessels up to the point of their distribution from the popliteal artery—making amputation at or above the knee necessary.

The operation was delayed one week and the patient was put upon a non-saccharine and non-starchy diet. Analysis of the urine, at the end of one week, showed that the sugar had been reduced to four per cent.

Amputation was now made above the knee. The patient bore the operation well, and there was but little shock. The wound healed promptly.

The point in this case of great interest to me is that an examination of the leg, subsequent to operation, showed the arterial vessels below the knee to have been almost completely occluded, and that an amputation anywhere short of the point at which it was made could have resulted in but absolute failure.

The literature upon this subject shows that this is usually the case, and that when an amputation is made necessary by a similar state of affairs, arising in the course of such a case, a high amputation, such as we made, is imperatively demanded. Still, in the face of all this literature advising high operation in this class of cases, we are constantly seeing low operations, simply removing the foot at the ankle, and the amputation made just above this point. And when this is done, we are accustomed to see almost constant failures as a result.

10 West Goodale Street.

Inclosed find M. O. for one dollar, for which send me the BRIEF for another year. I love it better than any other of my journals.—J. E. Cox, M. D., Boughton, Ark.

[Written for the MEDICAL BRIEF.]

Diseases of the Breast.

BY ALFRED DE ROULET, B. S., M. D.,
Chicago, Ill.
Formerly Professor of Surgery and Diseases of Women in the Medical Department of Trinity University.

V.—CANCER.

While we know practically nothing of the etiology of cancer of the breast, there are certain facts in the clinical history of each case which stand out with more or less prominence, and to which a considerable degree of importance should be attached.

The age of the patient is a factor of considerable importance, cancer of the breast being most prevalent in women of from forty to sixty years of age, seventy-five per cent of all cases occurring during this period. The condition is very rare in young women, and is practically unknown before puberty. The cases reported from time to time as occurring in very young children are, in most cases, I am inclined to believe, sarcomata, rather than carcinomata. Gross, in his study of sixteen hundred and twenty-two cases, finds that the average age at which cancer appears in the breast is forty-eight years, the earliest time of onset in this series being in the twenty-first year. Williams reports a series of five hundred cases, in which the youngest patient was twenty-four when the growth was discovered. In extreme old age cancer of the breast is comparatively infrequent, but whether this is due to a prevailing scarcity of extremely old people or to a lessened susceptibility, I am as yet unable to express an opinion.

Traumatism has long been considered an important etiological factor, but, on investigation, the data on which this belief is based is far from convincing. For example, if trauma was an efficient cause of cancer we would naturally expect to find the new growth developing in the portion of the breast most exposed to injury, as pressure or chafing from an ill-fitting corset, or from the injuries incident to nursing. As a matter of fact, cancer appears most frequently in the upper outer quadrant, which is the least exposed to injury of any portion of the breast, while the nipple and areola, which is the region most exposed, is almost immune. Gross was able to elicit a history of injury in one hundred and ninety-six cases out of one thousand five hundred and eleven cases examined; Winiwarter, with one hundred and seventy cases, found previous injury in twelve. Williams questioned one hundred and thirty-seven patients with a view to eliciting a history of previous injury and was successful in thirty-five cases, and of these thirty-five he says: "Many of the above affirmations appeared to me to be the outcome of imagination, rather than proving any real causal relationship, and in no case was there evidence that the disease had developed out of induration or other obvious lesion thus induced."

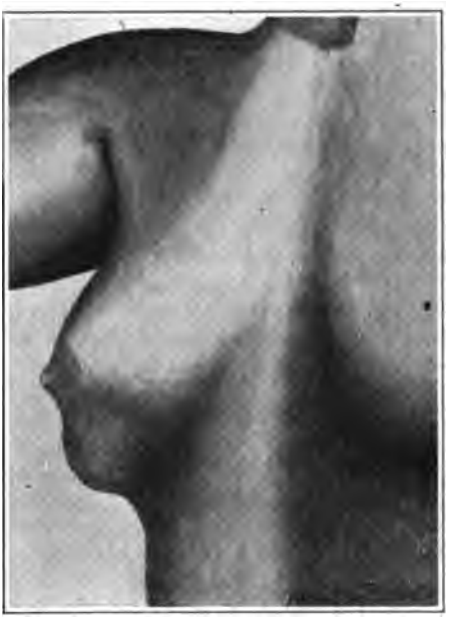


FIG. 1. Unusual Location of Nodule in Cancer of Breast, Tumor Appearing Below Nipple.

While it is undoubtedly true that cancer is not infrequently discovered at the time or shortly after the receipt of a blow or other injury, I am convinced that the injury has nothing to do with causing the cancer, although it may call attention to an already existing, but unsuspected, condition.

Lactation and chronic mastitis are considered by many to be important factors in the causation of breast cancer, but, as

in the case of trauma, the evidence is not sufficient to afford positive proof. In reviewing the histories of seven hundred and sixty-five cases reported by different authors, I find that of this number five hundred and twelve have nursed one or

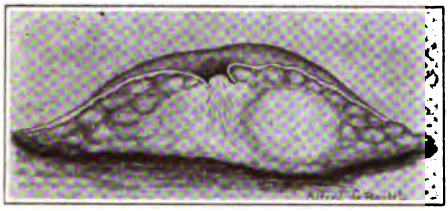


FIG. 2. Section Showing Gross Appearance of Carcinoma of Breast. Nipple Drawn Backward and Toward Tumor.

more children, while two hundred and fifty-three were either sterile or their breasts had never been functionally active. Until the fact is established that barren women are more than one-third as numerous as their more prolific sisters, we have no reason to believe that the normal activity of the mammary gland in any way predisposes to cancer.

Heredity is frequently mentioned as a cause of cancer, and in this instance I believe the evidence is sufficient to at least justify the conclusion that cancer or a predisposition to cancer may be hereditary. The frequency with which cancer appears in certain organs in several members of the same family or in several generations of the same family, is at least suggestive. For example, in the Bonaparte family, Napoleon I, his father, one brother, and two sisters died of cancer of the stomach. Senn says that he has repeatedly seen cancer of the breast in two succeeding generations. Sibley relates an instance of cancer of the left breast occurring in a woman and her five daughters. Broca has reported by far the most complete, as well as the most convincing case of this kind. Mme. Z. died of cancer of the breast at sixty, leaving four daughters, A, B, C and D. Of these four two died of cancer of the breast and two of cancer of the liver.

A left three daughters, who at the ages of sixty-eight, seventy-two and seventy-eight, were alive and free from cancer.

B left two sons and four daughters. Of these the second son died of cancer of the stomach, three daughters died of ca of the breast, and one of cancer of liver.

C had two sons and five daughters. first daughter died of cancer of the b and left two sons and three daugh of whom the second daughter died of cer of the breast. C's second daug died of cancer of the breast, the thi cancer of the uterus, the fourth of ca of the breast, and the fifth of cance the liver.

D left one son who, at the age of sev was still free from cancer.

Of the larger series of cases repo Paget has published a series of t hundred and thirty-two cases, in sev eight of which a history of heredity obtained, while in Williams' series of hundred and thirty-six cases, thirty-t gave a similar history.

Hereditary cancer appears much frequently in the female than in the members of the affected families. Br case illustrates this peculiarity in a s ing manner. Mme. Z and fourteen o nineteen female descendants, who rea the age of thirty, died of cancer, w only one of the seven male descend died in this manner.

Clinical History.—Ordinarily, the symptom noticed by the patient is a h indurated, irregularly-flattened mas the breast, situated, as a rule, in the

FIG. 3. Mammary Cancer, Showing Retra and Elevation of Nipple.

per outer quadrant, although it may situated in other parts of the breast below the nipple. (Fig. 1.) The dis ery is usually made by accident, as, dinarily, there has been little or no vious pain or discomfort to attract at

tion. Occasionally, the development of the tumor is accompanied or preceded by a peculiar momentary stinging pain, which comes and goes, reappearing at in-

FIG. 4. Cancer of Breast, with Infiltration and Ulceration of the Skin, and Retraction and Slight Elevation of Nipple.

tervals ranging from a few hours to several days. This stinging may be limited to the affected breast or it may extend into the axillary space or along the arm. This pain is never severe, but when present it is very suggestive of cancer.

The idea that cancer of the breast is a growth which "eats into the tissues" and is, necessarily, accompanied by the most agonizing pain, is, unfortunately, deeply rooted in the minds of patients generally, and it is often difficult to convince them that a cancer can exist without causing appreciable suffering.

On examination, the cancerous nodule is found to be of a peculiar wooden hardness, absolutely devoid of elasticity. The hardness is most pronounced in the central portion of the mass. The borders are blunt, irregular, and, on account of the infiltration of surrounding tissues, vaguely defined. The tumor is not movable in the tissues, except in very fat women with loose, pendulous breasts, but is likely to be adherent both to the skin and the retro-mammary tissues.

In the majority of cases the nipple is retracted, that is, drawn inward toward the chest wall, as well as in the direction of the cancer. (Fig. 2.) For example, if the tumor is situated in the upper outer quadrant, the nipple is drawn upward toward the clavicle. (Fig. 3.) This point is of some interest from a diagnostic standpoint.

Dimpling of the skin over the tumor is almost pathognomonic of cancer, and the more deep seated the tumor the more certainly does the dimpling indicate carcinoma. In elderly women, even the slightest dimpling should arouse grave suspicion.

As the tumor increases in size the overlying skin becomes reddened and congested, and presents a characteristic "pig skin" appearance. The infiltrated skin soon breaks down, forming an irregularly rounded ulcer with a crater-like cavity, with thickened, indurated edges. (Fig. 4.) The floor of the ulcer is formed by the surface of the exposed cancer, and is covered with more or less necrotic shreds and with ill-formed granulations. There exudes from the ulcer a thin, acrid, often blood-stained ichorous discharge, with a peculiarly penetrating and offensive odor. The ulcer progressively increases in size and shows not the slightest tendency toward healing.

The cancer not only invades the skin, but it extends backward into the retro-mammary tissue, and the pectoral fascia, and may even penetrate the chest wall and involve the pleura. (Fig. 5.)

As the disease progresses, the axillary lymph nodes become enlarged and matted together, making a hard nodular mass, which fills more or less completely the axillary space. (Fig. 6.)

Often there is noted a fullness in the clavicular region of the diseased side

FIG. 5. Extensive Carcinoma of Breast.

which is not present on the other. This means that the infection has spread along these lymphatics and may extend along the chain accompanying the internal

mammary artery, or may involve the bronchial glands at the root of the lung. Occasionally, the axillary enlargement becomes so excessive as to seriously in-

FIG. 6. Cancer of Breast Showing Retraction of Nipple, Ulceration of Skin and Enlargement of Axillary Lymphatics.

terfere with the brachial circulation and edema and even gangrene may result. (Fig. 7.)

In advanced cancer of the breast cachexia is often marked. The patient loses her appetite and becomes weak, pale and emaciated, the skin showing a peculiar yellowish pallor.

The diagnosis is based on the age of the patient, the presence of a hard, immovable, inelastic, rapidly-growing tumor, with irregular, infiltrating margins, dimpling of the skin, the formation of adhesions between the tumor and the skin and retro-mammary structures, ulceration, the comparative absence of pain or tenderness in and around the tumor, the presence of an occasional momentary stinging sensation, and the presence of enlarged lymph nodes in the axilla, and sometimes the supraclavicular region on the affected side.

The prognosis is always grave, but there is considerable difference in the degree of malignancy in different ca Under ordinary circumstances a scirr cancer of the breast, if untreated, kill the patient in from two to t years, while a medullary cancer runs course in a year or less. There are, h ever, certain considerations which ar some assistance in estimating the pr ble duration of any given case. The is of the greatest importance. In br cancer the younger the patient the m rapid the course of the disease. In tients over seventy-five a cancer may almost indefinitely, the patient eventu dying of some intercurrent affection. cancer also runs a more chronic cou in a thin and scrawny patient than in of a more pleasing plumpness. Early volvement of the skin and lympha renders the prognosis very grave, w if the tumor is pigmented, or if gen dissemination has taken place, the p nosis is hopelessly bad.

With operation, as a general rule, earlier the operation the better the p nosis, but, of course, there are except to this rule. Taking the cases as t

FIG. 7. Showing Edema of Arm in Case Atrophic Scirrhous Cancer of Breast.

appear, the favorable, the indifferent, the hopeless, when operated on by modern radical methods (Halsted's Meyer's), approximately forty per

are cured, and to be considered cured a patient must be absolutely free from all signs of cancer for at least three years after the operation. With selected favorable cases this percentage could undoubtedly be materially increased.

The treatment of cancer of the breast is essentially surgical. There is no drug or remedy as yet known which will, with any degree of certainty, retard the progress of cancer. The X-ray may be used as a palliative measure in inoperative cases, in the hope of at least relieving some of the more distressing symptoms, but the results from this treatment are not sufficiently positive or certain to justify its employment in cases amenable to operative treatment. Caustics and so-called cancer pastes are employed in some cases with undoubted success, yet their disadvantages are so great and their advantages so small, as compared with operative treatment, that I can see very little to recommend in these relics of surgical barbarism.

1013 Venetian Building.

[Written for the MEDICAL BRIEF.]

Treatment of Typhoid Fever.

BY RALPH M. MORRILL, M. D.,
Lincoln, Neb.

In this age of therapeutic nihilism, a discourse on this subject from a medicinal standpoint is out of the ordinary and distinctly irregular; but I have found by comparison that the general run of cases get along best that are treated from an intelligent therapeutic standpoint. It is also essential that one have a thorough knowledge of the disease from a pathological standpoint, so as to be able to recognize all conditions rightly when they present themselves.

That which has done most to discredit medicinal treatment is the so-called antiseptic or germicidal idea as regards the intestinal tract. From Woodbridge down to the present time, the idea has been to sterilize the gastro-intestinal mucosa, so that no wonder, to our own discredit, we leave it to the nurse; internal secretions, and functional activity of all the emunctories are lost sight of. We do not get at the basic lesion; as it stands now tympanitis and borborygmi must be relieved by salol, hemorrhage by opium, delirium by whisky, cold bath for pyrexia, and so on until the patient gets well anyway or dies from toxemia and exhaustion.

Classical typhoid does not embrace those types which are questionable, such as the so-called abortive type, typho-malaria, or typho-pneumonia; not but that disease conditions may take on typhoid manifestations, but the usual bacilli are absent, so we will take the typhoid case that runs from three to six weeks.

The usual case when seen has been feeling badly for some time, has the general prodromal symptoms, tongue coated, bowels constipated, anorexia complete. Castor oil, a sufficient quantity to produce a thorough evacuation, is given at once, and is the only agent for this purpose worthy of consideration. Enemas are all right to clean out the lower bowel, but are not to be depended on exclusively. The tongue will be coated a dirty white, pasty, will be broad and thick—an evidence of a disordered condition of the body fluids that will be benefited by the hypophosphite or sulphite of soda. I frequently give it until the urine is alkaline, the hyposulphite of soda in capsules and the sulphite in solution; the addition of chionanthus is generally beneficial, and on account of its selective action is most always indicated. If the tongue is inclined to become dry or fissured, dilute hydrochloric acid will be of much benefit, in place of the sulphites; in fact, during the fastigium and deferverscence, it is frequently indicated, and the indication will have to be looked for. A casual observation may see the tongue coated for the sulphites, but if you will examine more carefully you will observe that at the edges there is a beef-red appearance which indicates the acid. By maintaining a normal balance of the intestinal secretion by the acids or alkalies, you will find that diarrhea, tympanitis, anorexia, delirium, etc., are of minor importance. I frequently find a combination of this character useful:

℞ Dil. Hydrochloric Acid.....3 drachms.
Sp. Chionanthus.....4 drachms.
Sp. Hyoscyamus.....2 drachms.
Elix. Lac. Pepsin.....q. s.....4 ounces.

M. Sig.: Drachm every three hours.

For the pyrexia I use a combination, giving the mixtures in five-grain doses every three hours. The cold bath is a travesty on good judgment; it stops radiation and produces visceral congestion, and I have never seen anything but bad results from its continued use. Cool or lukewarm sponging is indispensable, or a cool compress to the abdomen will not inhibit radiation; the addition of alcohol to the water is of value also. Hypostatic congestion of lungs is most always relieved by changing the patient's position; delirium is treated by the application of cold to head and a half grain of codein. Hemorrhage is treated not by ergot, opium, etc., but I make a tincture of oil of erigeron and oil of cinnamon, one drachm of each to two ounces of alcohol, the dose being from five to thirty minims, and add small doses of ipecac and belladonna to the mixture, with better results than anything else. Charcoal and milk have been helpful in some cases. Outside of normal salt and camphorated oil I know of no satisfactory stimulant.

From a dietary standpoint I consider fruit juices essential—orangeade, lemonade and grape juice are preferable; sweet milk, buttermilk, matzoon or koumiss, egg creams, vegetable soups, tomato in particular, and beef broth sparingly. This is variable enough and will not grow monotonous.

In hygienic considerations there is nothing new. I use a saturated solution of bichloride of mercury to disinfect all excreta.

To treat a subject of this kind exhaustively requires a volume. To sum up, we do not need too much antisepsis from a germicidal standpoint; we should strive to establish a normal condition of functional activity of all structures from the peptic glands to the crypts of Lieberkühn, and results will usually be found satisfactory.

Brownell Block.

The MEDICAL BRIEF has been called the Medical Bible by more than one of our friends, but has it ever occurred to you who have seen it that it is the cleanest of all medical journals in its expressions and illustrations? No language is used that is not expressed in a delicate way, and purely scientific in its thoughts and meaning.

[Written for the MEDICAL BRIEF.]

Hyper-Oxidized Hydro-Carbon Treatment in Tuberculosis — Oxygen Liberated in the Stomach from Oxides — Hemoglobin as Oxygen Accumulator.

BY PROF. E. C. GETSINGER,
Biologist, Washington, D. C.

What relationship oxygen inspired holds to life, and the processes by which it is capable of perpetuating life, is known only in a most limited way. That oxygen, once in the circulation, becomes subject to conversion into energy, motion or vitality when combined with the other processes akin to life, is but general knowledge. It can not be considered severally only in so far as it is the principal substance which aids in sustaining life. The lungs are considered to be the principal, in fact, the only solitary means of conveying oxygen to the blood.

So was the stomach formerly considered in its function until rectal feeding was discovered and found to be a successful recourse. Then why not liberate oxygen in the stomach, and there taken up by the circulation when the lungs are impaired by disease? Is not almost every form of food consumed some form of an oxide? and is the oxygen not liberated? Or does the system reject the same from that source because of the non-ethical manner in which that life-force dared enter into the chemical brotherhood. Would not such a form of liberated oxygen treatment in the stomach be the panaceal treatment for tubercular patients whose healthy lung areas are so decreased as to enervate them, and thus render them even more subject to the processes of dissolution.

In tuberculosis we enter a realm of mystery greater than anything in the index of diseases. I am not inclined to invite unnecessary prejudice of the profession by reciting the results of twenty years of research, thought, meditation and experience in this direction—at least not in America. I know them too well, as a class, for that. I will thus confine myself more to ancient facts and endeavor to throw a flicker of common sense on them, which may appear as a new light,

and in so doing it is my aim to exhibit more common sense than erudition.

The ancient facts record that hemoglobin constitutes ninety per cent of the blood composition. That the ratio of molecular composition is, carbon, six hundred; hydrogen, nine hundred and sixty; nitrogen, one hundred and fifty-four; sulph. iron, three; oxygen, one hundred and seventy-nine. That hemoglobin has a great affinity for oxygen; yet, while in solution a molecule of hemoglobin holds a ratio of only one hundred and eighty of oxygen to one thousand nine hundred of other constituents. That it readily liberates its burden of oxygen under certain circumstances, or in other words, hemoglobin has a function of holding quantities of oxygen as an accumulator rather than a solvent of oxygen. Only a small portion of oxygen inspired remains in the blood as a gas. Over ninety per cent is combined in the form of an oxide, and thus enters into the blood and tissues. In this oxidic form I believe it enters the circulation by way of the stomach. It is also true that the plasma likewise holds only a small portion of oxygen in simple solution. That the blood, as a whole, contains more carbonic acid than oxygen, in a ratio of twenty volumes of oxygen to thirty-nine and forty-six volumes of carbonic acid in one hundred parts. The chief part of oxygen is contained in the blood corpuscles, but not in a simple solution either, but in a form of an oxide, with the molecular arrangement so constituted that the oxygen is but loosely held together, and which is readily liberated when other functions require it.

To supply tubercular patients with sufficient oxygen is now the cry of the medical profession the world over, and in being at a loss as to how to proceed by medication, open air and altitudes are the only means at hand. When oxygen is taken into the lungs or stomach in quantities from a tank or other contrivance, it can only result in too rapid chemical action and tissue changes, and become an irritant, as is proven by dioxide upon lesions. But when administered in a compound, or in an oxidic form, where there must first a process play upon the compound before the oxygen is liberated, then such inflammatory dangers are avoided, by slow and gradual liberation, giving the hemoglobin time to prepare for its accumulation as rapidly as it is given up. I thus consider the oxygen tank a means of "rapid transit" in many cases. Furthermore, along this line we find that a molecule of hemoglobin contains six hundred atoms of carbon, an element which has the greatest affinity for oxygen, with a power of attracting at least ten to one, of oxygen. Then hydrogen, at nine hundred and sixty atoms, has the power to attract at least twice its bulk of oxygen. Thus, one molecule of hemoglobin, broadly considered, has the accumulative properties of holding in loose solution at least eight times its bulk of oxygen, without altering its own chemical composition one iota.

How does it do this? Apply the principles involved in storage batteries, and you have the answer.

When the assimilation of carbon is reduced or imperfect, the hemoglobin becomes carbohemic for want of the element which can possibly hold the oxygen after being inspired, because a single atom less of carbon means, perhaps, ten less of oxygen, and since the majority of tubercular patients suffer from some form of intestinal indigestion which affects the assimilation of carbon, we need not look far for the seat of the principal disturbance. The deficiency of oxygen in the blood, caused by the lack of carbon in quantity, renders the patient subject to the ravages of the tuberculous processes, the resistance being diminished, and with normal chemistry disturbed, only morbid processes are possible. The tubercular patient can be saturated with oxygen by any of the various methods, yet if the carbon is deficient, so that the accumulative power of hemoglobin is diminished, then the patient becomes enervated in spite of oxygen, because proper oxidation does not take place. The hemoglobin holds oxygen in reserve supply—ready to be converted into whatever form of energy the body might demand. It seems to act similarly in this respect as does a juggler of balls—holding five balls in one hand for disposition by the other, yet is receiving another ball in the place of each one as soon as disposed of. The ball

never is and never was a part of the hand, nor are the atoms of oxygen, above a certain number, a part of the hemoglobin. Where the supply of oxygen is not equal to the demand, and the hemoglobin is overdrawn on its reserve supply, it will naturally yield up its own oxygen, as far as possible, and thereby the normal quantity of hemoglobin be reduced. Where the healthy lung area is so diminished by disease as to render the supply of oxygen insufficient for normal oxidation of tissue, then morbid processes ensue, residual animal tissue accumulates, and, finally, various bacillus form—possibly of spontaneous origin—only to add their toxic influence to the whole condition.

Saturation with oxygen is not possible in cases where air cells are collapsed, paralysis of the lungs exists, hepatization and congestion interfere, unless oxygen can be liberated in the stomach, and thus thrown into the circulation. It is possible, and is a fact. It has been done for years with surprising results in tuberculosis of the lungs, successfully in even the thir stages, where cicatrization of cavities followed and became filled in with scar tissue, as will physicians associated with me in experimental work testify. Over eighty-six per cent of cures, without relapse after from one to five years, some cures made twelve years ago are perfectly well to-day.

Then, also, as soon as the supply of oxygen becomes low, and the hemoglobin has already parted with as many of its one hundred and seventy-nine atoms per molecule as it can possibly spare, then nature seems to arouse itself in an effort to consume the unoxidized matters in the blood, a wave of endeavor is manifest, only to fall back disheartened, because in the impoverished state of oxygen the effort could only result in water—night sweats, respiration being less at night time than in active moments, hence less oxygen, thus toxic matter accumulates, while the enervated state can not generate sufficient energy for combustion, but only enough to form H_2O.

As soon as such a patient is properly supplied with both oxygen and carbon, then the night sweats cease, simply because normal combustion is taking place, and toxic matters burdening the blood and tissues are being oxidized. This result has been attained in over two hundred cases which I have had the opportunity to observe, wherein patients were fed every thirty minutes with a form of hyperoxidized hydrocarbon, the carbon taken from any of the various balsam and essential oils, excessively oxidized, placed in a medium of fats derived from grape sugar. The oils being first treated so as to eliminate their toxic properties, or else patients would have to be under careful observation every moment of the day.

Almost daily I am disputed in the fact that oxygen can be liberated in the stomach, and then be taken up in the circulation, and this from men of reputed intelligence. Whether this is a more general belief among the medical brethren I do not know, but to settle the question once for all, I will quote from one who had sixteen years of intimate acquaintanceship with Justus Baron Von Liebig, of the University of Giessen. I refer to William Gregory, M. D., F. R. S. E., Professor of Chemistry, University of Edinburgh, who, as far back as 1850, wrote in his work on "Organic Chemistry," page 576: "This proves that the formation of fat from sugar in the animal body, which certainly takes place, is a source whence the blood may obtain oxygen when respiration is impeded."

It is still the practice, to a great extent, to treat patients who show anemic or tubercular tendencies, with iron in some form, in the expectation of rendering the blood normal. But when we consider that in one molecule of blood corpuscle we find, perhaps, only three atoms of iron against six hundred atoms of carbon, then this seems to indicate that but little meditation is given to this all-important subject of medicating according to the chemical requirements rather than the "fads." To treat such conditions with a digestible form of carbon, and when combined with oxygen, the value is greatly enhanced, would appear to be rational treatment, for such medication not only supplies a limited supply of oxygen, but induces the carbon as well, which will in time be taken up by the hemoglobin, and there hold, perhaps, eight times its bulk of oxygen besides. The carbon from vegetation is more readily converted into blood prop-

erties. If this were not true, then feeding on charcoal or coal dust would give the same results.

All treatments for tuberculosis brought to light during the past fifteen years, were successful only in so far as the remedy contained carbon and oxygen. The more of those elements the more successful the treatment, yet not one of the numerous treatments of that period made it possible to saturate the patient with oxygen. The old essential oil treatment has never been surpassed, as far as medication for tuberculosis is concerned. It was the toxic dangers which caused the medical profession to discard it, and not the failure to cure that disease. Instead of overcoming the difficulties, they sought other less dangerous methods and, finally, adopted creasote, which in the end only created irreparable stomachic disorders. And in this form of medication it only succeeded in overcoming tuberculous conditions in ratio to the oxygen and the very small volume of digestible carbon it contains.

Nearly all tuberculous patients suffer from some form of intestinal dyspepsia—malassimilation of carbons, and thus nitrogen or carbonic acid are absorbed to excess. Then why feed such patients on nitrogenous fats?

Practitioners have spent years in an endeavor to treat tuberculosis with a germicide, after Koch discovered the bacillus, only to finally—and without much noise—find that the bacillus is the effect, not the cause *per se*, of the disease. Then followed the essential oil treatment, then codliver oil, then creasote, then various serum treatments from the French school, and, finally, open air, milk and egg diet—albumen for the hemoglobin, instead of carbon. Yet with all of these methods of treatment, tubercular patients are now a thousand to where there was one when I began my experiments. In those days there was no alarm. I simply took it up as one of the problems of that day, never dreaming that before my work was completed that the disease would assume the proportions of a plague, nor did I ever anticipate that the medical profession would ever say "that no cure would ever be found," and with such pessimism openly teach a suffering public that no hope is held out, even to their generations.

I understand that the MEDICAL BRIEF has a large European circulation, and since I desire very much to bring this treatment into the hands of various foreign governments for the benefit of humanity, I take this means of bringing my proposition to the possible notice of the profession in those countries.

I have vainly tried to give my discovery to the United States Government, but it is only in a position to take notice of discoveries in processes of new gun metal and kindred merciful (?) ideas.

I propose to place the discovery into the hands of any government for the purpose of manufacture and distribution to the physicians. There are no patents connected with the processes, but the raw materials are exceedingly dangerous, and to place the process into the hands of careless operators is out of the question.

I have unlimited confidence in the treatment, and back up my sincerity with a proposition that I will furnish free of cost sufficient hyper-oxidized hydro-carbon tablets for a complete course of treatment of one hundred patients, and this with each country.

The test to be made by physicians as a body authorized to deal with the matter by their respective governments, and if satisfactory results are attained, the entire matter will be turned over to a commissioner and the knowledge connected with the manufacture, the governments to only pay the necessary expenses connected with the transaction.

I can not treat with physicians individually, nor those desiring to enter into a business arrangement. The treatment ought to be kept out of mere profit-sharing endeavors.

The distribution to physicians in the United States has been turned over to a physician of repute in New York City, a member of the A. M. A.

150 East Capitol Street.

Inclosed find check for one dollar, subscription to the BRIEF. Can't get along without the BRIEF. Must have it.—ALEX. HARDCASTLE, M. D., Denton, Md.

[Written for the MEDICAL BRIEF.]

General Remarks of the Pelvic Floor.

BY BYRON ROBINSON, B. S., M. D.,
Chicago, Ill.

(Continued from page 555.)

The levator ani fascia proximal and distal is the real visceral support. I think it was Dr. Meyers, a German physician, who first happily named it the pelvic diaphragm. In many subjects it is membranous. The normal muscle has the shape of a boat, and when this boat-shape becomes cone-shaped, the pelvic floor is impaired. The levator ani is composed of many muscular bundles coursing chiefly parallel to each other, but also at varying distances. The bundles are flat, ribbon-like, and of a bright red color. The bundles of muscular fibers are maintained at greater or less distance from one another by collections of fat or connective tissue in varying degrees. Fenestra, or apertures, are commonly observed between the muscular loops. The capacity of the bundles of the levator ani muscle to separate and reunite without injury, serves a useful purpose in labor, when rapid and wide distention of the pelvic floor may occur. Too many figures illustrates the muscle as a distinct plane with no parallel gaps between the bundles.

The levator ani (the deep, muscular layer of the pelvic floor, is connected to the external sphincter ani of the rectum and vagina), the superficial muscular layer of the pelvic floor, and by this muscular connection to the perineal body (the punctum fixum), the deep and superficial muscular layers of the pelvic floor are maintained in intimate relations of much utility. A few fibers are lost in the perineal body. The levator ani is in closer organic relation with the rectum than the vagina, because the rectum requires more frequent and perfect evacuations than the vagina. It is chiefly a sphincter muscle. The weakness or limited degree of its origin and insertion, and the direction of its fibers, are in accordance with its fading existence.

The proximal curve of the rectum is due to the horseshoe-shaped loop of the levator ani, which originates chiefly from the dorsal surface of the pubis. By the contraction of the distal stronger fibers of the levator, the distal portion of the rectum is forced against the perineal body, which compels the anus to turn dorsalward and to evacuate its contents. The levator ani, on account of its form and dimension, allows deficiencies in the pelvic floor, which are occupied, ventrally, by the bulbo-cavernosus and dorsally by the coccygeus muscle, its continuation backward.

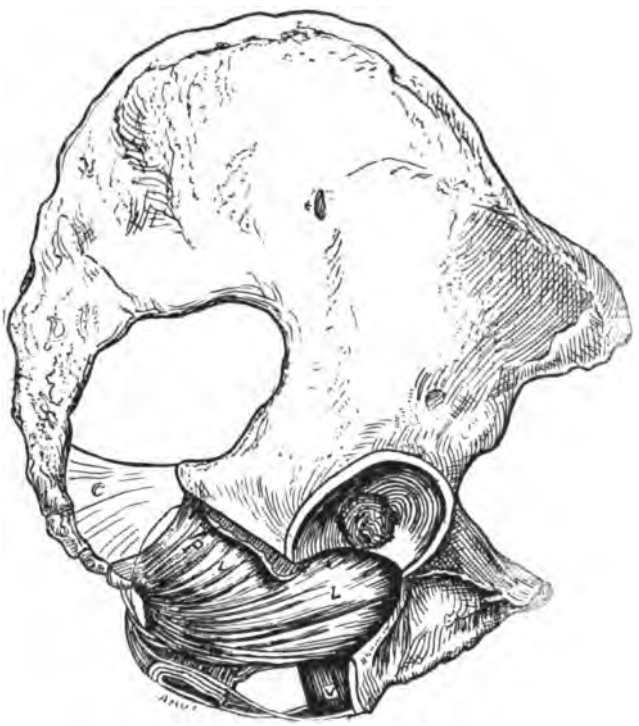
The palpable rounded border of the levator ani lies three-quarters of an inch proximal to the anus and three-quarters of an inch proximal to the vaginal aperture, making the muscle, in fact, a regulator of the external apertures of these two canals. Normally, the orifices of the canals are maintained closed by sphincters. They remain patent only by internal or external force, or from trauma. The levator ani will elevate from five to twenty pounds, averaging about ten, as noted by Dickinson. As every gynecologist knows, its strength soon tires assistants in vaginal hysterectomy. From its insertion into the perineal body the external sphincter, post-rectal raphe and coccyx, it draws ventralward the post-vaginal structures of the pelvic floor. In the excellent work of Savage, he names the portion from the principal bony origin, pubo-coccygeus. This is erroneous, as these loops do not pass as far dorsal as the coccyx—do not even come in contact with it. The levator elevates the rectum and vagina ventralward and proximalward to the pubic arch. The muscle has but limited influence on the lateral wall or borders of the rectum. The muscular fibers composing the horseshoe loop exercise the chief influence over the dorsal rectal wall, while the portion of the muscle arising from the white line (fascia) serves its purpose by maintaining the pelvic diaphragm in relation prepared for any immediate action; with its proximal and distal fascia it makes a tense floor for the superimposed viscera.

The levator ani fascia proximal and distal lends the muscle its greatest utility by increasing its strength, and also producing harmonious action in its function. The horseshoe sling is inseparably blended with the sphincter ani externus. The levator ani produces the H-shaped condition of the vagina by lateral pressure,

and its puckered or constricted appearance at the orifice. The muscle becomes hypertrophied during pregnancy and vaginismus. It resists the head in labor to a surprising degree. It may be easily observed in slow labor, when, if small forceps sufficient to overcome the tension of the muscle be applied, labor proceeds rapidly.

The comparison of the diaphragm (diaphragma thoracis) and levator ani (diaphragm pelvis), as to the capacity for strength is in favor of the levator ani. Its strength varies much in different subjects. The best descriptions of the levator ani muscle are given by Henle, Luschka, Testut and Lesshaft. Hart and Dickinson, Studdiford, have made excellent studies on this muscle. Browning and Peter Thompson wrote interesting articles on the subject. The levator ani may be a rudimentary muscle, disappearing with the tail and in the evolutionary process of an erect attitude. This view may arise from the weakness of its origin, the direction of its fibers and insertion, as well as the requirement of the double fasciæ. It is unphysiologic for a muscle to produce constant support, hence the levator ani can not be considered a continuous support for the viscera; it is rather a sphincter muscle.

The levator ani muscle is analogous to the buccinator muscle, or the ocupitofrontalis. Perhaps from an evolutionary standpoint we may look on the levator ani as having three functions, viz.: (a) of a sphincter; (b) of an elevator; and (c) of a tensor of the levator ani fascia proximal and distal. As proof that the levator ani is a sphincter one need only introduce the finger into the vagina and request the subject to contract the muscle. Cruveilhier, Henle, Lesshaft and Budge insist that the levator ani is a sphincter of the anus and distal rectum chiefly, and not an elevator. That this muscle is an elevator, one need only dissect it to find the muscle ending definitely in the walls of the rectum, and such ter-



LATERAL VIEW OF THE LEVATOR ANI MUSCLE.

FIG. 9. L, L, the curved levator ani muscle surrounding the rectum; V, vagina. The grasp of the levator ani muscle on the rectum is here evident. P, the levator ani fascia distal represented in a roll. (Luschka)

minating fibers, when in action, could only elevate the rectum. The horse during defecation illustrates that the levator ani is an elevator, as the rectal wall is elevated, the rectal mucosa everted and completely evacuated. As an elevator, it resists intra-abdominal pressure.

The levator ani appears as well developed in the male as the female, and hence labor does not appear to develop it. The levator ani muscle is greater in those animals with a tail, and originally its chief function was to aid in managing the tail, from which it would appear that as a tensor of the levator ani fascia proximal and distal these fibers take an active part. They originate at a definite fixed point, lose themselves between the fascial blades and do not extend to rectal or vaginal walls. When a muscular fiber neither goes to the rectum nor ends in its wall, it will not act as a sphincter, nor as an elevator, except in mass or adjacent connection.

Lesshaft and Roux divide the levator ani into two layers, viz., (a) the internal proximal layer, which is an elevator, and (b) the external distal layer, which is a sphincter.

The trigonum urogenitale forms a muscular tendineous plate, possessing the form of a triangle, located in the subpubic angle, and is pierced by the urethral and vaginal tubes. The essential constituents of the trigonum urogenitale forms the muscular trigoni urigenitalis, which is related to the vagina as the levator ani and coccygeus is related to the anus.

In short, one might state that the pelvic floor consists of two anatomic segments, viz.: (a) the levator ani (plus the coccygeus) with their proximal and distal fascia and related distinctly with the rectum; (b) the musculus trigoni urogenitalis plus the ligamentum trigonum which is distinctly related to the vagina (and urethra).

The fascio-muscular apparatus of the pelvic floor spans the osseous-ligamentous space in the pelvic exit, and practically consists of two different segments, viz.: (a) the diaphragma pelvis; (b) trigonum urogenitale. The diaphragma pelvis practically extends over the general pelvic floor, forming a funnel, the outlet of which is represented by the anus. The foundation of this funnel is the levator ani muscle (together with the coccygeus muscle). The levator ani is practically connected and related to the anus.

The levator ani plus the coccygeus muscle forms the muscular pelvic floor, on which rests the pelvic viscera and for which it possesses exit apertures. Dr. Howard A. Kelly, in my opinion, attributes excessive powers of support to the muscularis of the pelvic floor while deficient power is attributed to the pelvic floor fascia. To illustrate that the pelvic musculature is not the main support, we may suggest that the muscles of the pelvic floor characteristically originate and terminate in fascia, tendons.

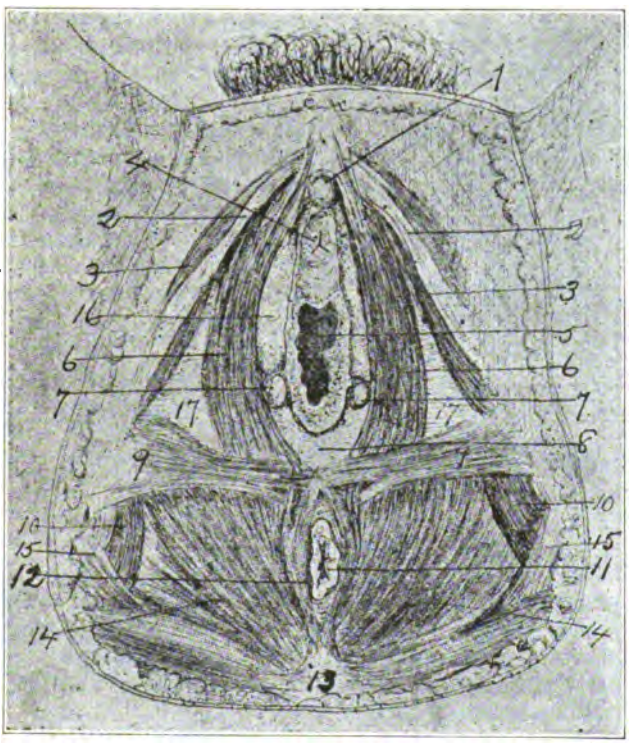
The dorsal portion of the levator ani muscles presents a funnel form between the ischial spine and coccyx.

As regards the minute division of the levator ani into separate independent bundles or muscles, much depends on personal taste. For example, W. A. Newman Dorland remarks that the levator ani is really composed of four paired muscles, designated as ischio coccygeus, ileo-coccygeus, pubo-coccygeus and pubo-rectalis, or Holl's sphincter recti. These simply indicate points of origin. Most anatomists divide the levator ani into two muscles, viz.: (a) muscularis-pubo-coccygeus and (b) musculus ilio-coccygeus. In general the levator ani originates from the lateral parietes of the lesser pelvis, passes distalward and medianward, uniting with its apposite fellow to form the muscular pelvic floor. It aids to support the pelvic viscera and surrounds the structures which penetrate it. The levator ani restores the pelvic floor to its normal position subsequent to the efforts of parturition, defecation or urination. It is a muscle of forced expiration. If the dissector divides the levator ani into two muscles—pubo-coccygeus and ilio-coccygeus—the pubi-coccygeus will concern itself with the rectum, one part of its fibers acting as a sphincter recti, the other part as a compressor recti (Holl's muscles), while the ilio-coccygeus is chiefly a supporter in the pelvic floor. The levator ani is supplied by a branch from the ventral division of the IV sacral and a

branch from the pudic nerve which relates intimately with the genitals.

Space forbids descriptions from comparative anatomy. However, the main change in man's pelvic muscles and fascia from that of lower animals is due to absence of tail and erect attitude.

2. *Coccygeus Muscle* (*musculus coccygeus*).—The musculus coccygeus is a flat triangular muscle arising by its apex chiefly from the ischial spine and lesser sacrosciatic ligament. It extends medianward, fan-shaped and becomes inserted by its base in the lateral border of the two distal sacral vertebræ and two proximal coccygeal vertebræ. The coccygeal muscles assist the levator ani and pyriformis in closing the dorsal portion of the pelvic floor or apertura pelvis distal. The relations of the coccygeus are: its ventral border is in contact with the dorsal border of the levator ani, however, separated from it by a connective tissue tract. Its dorsal border is in relation with the distal border of the pyriformis. Its proximal surface relates itself with the rectum. Its distal surface is in relation with the lesser sacro-sciatic ligament. It is supplied by a nerve branch from the IV and V sacral. The coccygeus muscles (bilateral) elevate and support the coccyx subsequent to its pressure dorsalward from defecation or parturition. The coccygeus muscle is one of the typical examples of a muscle becoming transformed into a fibrous tendinous band, fascia, from recession or deficient use (as the coccygeus was originally a powerful lateral caudal motor in primitive mammals).

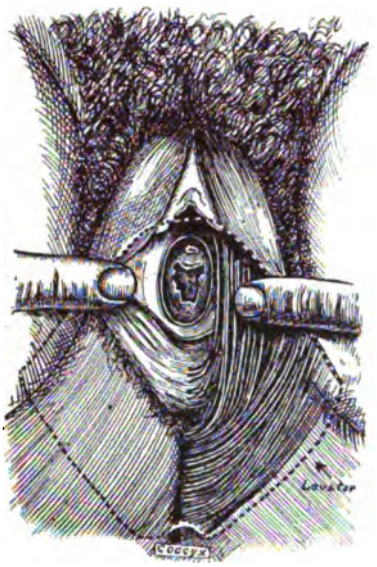


SUPERFICIAL MUSCLES OF PELVIC EXIT.

FIG. 10. I drew this illustration semidiagramatic to illustrate the general view of the muscular pelvic exit and its relations. 1, clitoris; 2, crura clitoridis; 3, erector clitoridis musculus; 4, urethra; 5, orificium vaginam; 6, musculus bulbus cavernosus; 7, pudendo-vaginal glands (of Duverney, Bartholin, Tiedeman); 8, dorsal vaginal commissure; 9, musculus transversus perinei; 10, musculus obturator internus; 11, anus; 12, sphincter ani externus; 13, coccyx; 14, musculus levator ani; 15, ligamentum sacrum, scraticum major; 16, bulbus vaginæ; 17, deep layer of superficial perineal fascia.

3. *Pyriformis* (*Musculus Pyriformis*).—The pyriformis is a flat, pyramidal muscle. Its origin is on the lateral borders of the II, III, IV sacral vertebra

from the distal border of the major sacro-sciatic notch and from the major sacro-sciatic ligament. Its course (partly internal and partly external to the pelvis)



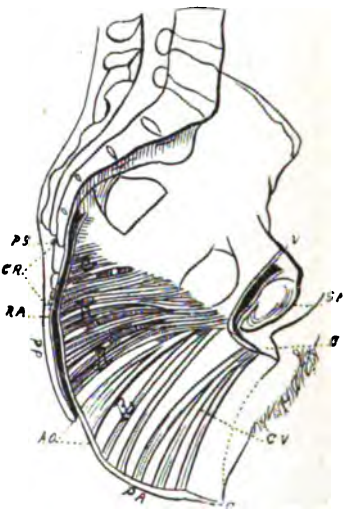
LEVATOR ANI MUSCLE AS VIEWED THROUGH THE SKIN.

FIG. 11. The pelvic exit is dotted. The directions of the levator muscle is evident (illustration from Dickinson, 1889).

is through the major sacro-sciatic foramen. It is inserted by a rounded tendon in the proximal border of the trochanter major. It affords a bed on which the sacral nerves can rest and be protected. The pyriformis and coccygeus muscles appear as a continuation of the levator ani and to line the distal as well as the dorsal pelvic wall.

4. *Sphincter Ani Muscle Externus.*—The sphincter ani externus is a thin, flat plane of an elliptical form. It arises from the coccyx, adjacent skin and superficial fascia. In its course it encircles the rectum and becomes inserted into the central tendon of the perineum, the skin ventral to the anus and other muscles. It is supplied by branches from the nervus penendus. The sphincter ani is intimately adherent to the integument surrounding the margin of the anus. The length of the sphincter ani is about four inches and its breadth on the lateral border of the anus is an inch. The sphincter ani maintains the anus continually closed. It can be firmly contracted by will, as in forced expiratory action (controlling contents). It being inserted in the coccyx, it aids to fix the central point of the perineum so that the accelerator urinæ may act. The sphincter ani aids to strengthen the pelvic floor by its action on the anus, as also by its attachment to the centrum perineal on tip of the coccyx. The anal group of muscles—levator ani, coccygeus, pyriformis and sphincter ani—so far as muscular support is concerned, play a major role in the perineum. They do not lend the perineum of pelvic floor its main support nor strength that is performed by fascia. Muscle functionates, fascia supports. Fascia is the corner stone to bear burdens forced on it by muscles.

Insertion.—From this description of the levator ani from actual dissection it will be observed that the insertion of the levator ani is: (a) on the opposite side of the pelvis from the identical location of its fellow origin; (b) to a limited degree



DISTENDED LEVATOR ANI.

FIG. 12. The elongated and separated bundles of the levator ani are here presented. V, bladder; SP, symphysis; C, clitoris; CV, constrictor of the pudendum; F, fourchette; PA, ventral perineum; AO, anus; PP, dorsal perineum; CR, coccyx; PS, distal point of sacrum; RRR, marks the distended levator ani in separated bundles. The middle R is on the most powerful bundle. The capacity of the levator ani muscle to separate into bundles, fasciculi aids to prevent rupture. Multiple muscular fasciculi separated yield more extensively than if in one solid bundle (Varnier after Dickinson).

in the median tendineous raphe; (c) some fibers may be inserted in the coccyx, rectum, vagina, perineal body, external rectal sphincter.

The white line, arcus tendineus. The crescentric, curved line, of ligamentous origin of the levator ani is profoundly connected with the pelvic fascia and the muscular fibers of the levator ani begin as tendineous fibers which form the white line. The ligamentous origin of the levator ani muscles is the blended, coalesced, powerful, fibrous fascial planes of the levator ani proximal and distal.

II. PUDENDAL GROUP OF MUSCLES.

In the pudendal group of muscles of the pelvic floor or perineum, I shall include, 5, Sphincter vaginæ (or Bulbo covenosus); 6, erector clitoridis; 7, transversus perinei superficial; 8, transversus perinei profundus. This group of muscles is intimately related to the pudendum in controlling the vaginal caliber, sexual relations and in maintaining the position of the pudendal orifice.

5. *Sphincter Vaginæ.*—Constrictor vaginæ, constrictor cunni, bulbo cavernosus. The sphincter vaginæ surrounds the distal end of the vaginæ. It is a double muscle. It *arises* from the distal border of the ligamentum triangulare or lamina aponeuratica and centrum perineale. In other words, it arises dorsally from the transverse perineal fascia midway between the sphincter ani and ischial tuberosity. A limited number of fibers is connected with the sphincter ani externus. The sphincter vaginæ becomes inserted by two bundles, the lateral of which attaches itself to the curve of the cruva clitoridis, and the medial bundle of which unites itself with that of its fellow distal to the clitoris into a single tendineous plate.

The sphincter vaginæ is a thin, broad, pale, red muscular layer. Through its sheet-like layer the blue bulb of the vagina shimmers. It surrounds the lateral vaginal walls. Its insertion into the bulb of the vagina, on the surface of the corpus cavernosum of the clitoris and in the mucosa between the clitoris and urethra suggests its sexual signification. Its contraction increases the turgidity of the bulb and hence limits the vaginal orifice —it is a sexual muscle, compressing veins and inducing erection of tissue. The sphincter vaginæ—bulbo cavernosum—partially occupies the space between the bilateral origins of the levator ani from the symphysis pubis. It not only surrounds the vagina but also the vestibule. It aids to strengthen the pelvic floor by means of its sphincter action on the vagina.

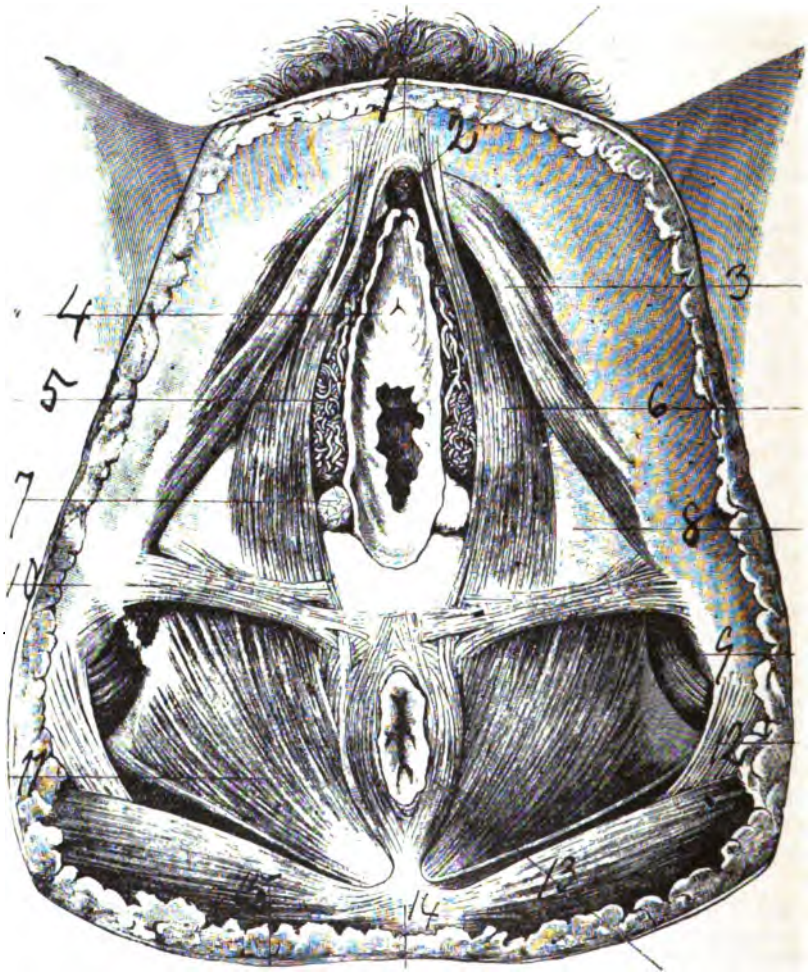
6. *Erector Clitoridis* (ischio-cavernosus. The erector clitoridis or ischiocavernosus muscle is located along the lateral wall of the vagina. It *arises* from the internal surface of the tuberosity and ramus of the ischium. In its *course* it embraces each crus clitoridis and becomes *inserted* in the fascia which envelopes the dorsal portion of the corpus clitoridis adjacent to the point of attachment of the ligamentum suspensorium. The erector clitoridis during contraction obstructs the return flow of venous blood inducing erection of tissue—it is a sexual muscle.

7. *Transversus Perinei Superficialis.*—The superficial transverse perineal muscles is practically a subcutaneous muscle or a subfacial muscle. It may originate from bone or fascia. In general it arises from the internal surface of the ischial tuberosity and varies in conjunction with the erector clitoridis and coursing medianward and proximalward becomes inserted in the centrum perineale. Some fibers may join the sphincter ani externus. Some of the fibers of the transversus perinei superficialis may be branched bundles from the levator ani. This muscle is intimately connected with the distal border of the trigonum urogenitale or triangular ligament.

8. *Transversus Perinei Profundus Compressor* (constrictor urethra).—Transversus perinei profundus (Hanle) *arises* from the internal surface of the junction of the rami of the ischium and pubes. It *courses* ventral to the urethræ and dorsal to the vagina. It is attached to the urethral and vaginal walls, blending with the opposite fellow. Unlike the male, the vagina divides the transverse perinei profunda. This muscle is intimately connected with the triangular ligament or trigonum urogenitale. On account of distribution adjacent to the membraneous urethra, this segment of the muscle is termed the compresor urethræ. Dr. H. O. Marcy states that at the central point of union the muscular fibres interdigitate or blend with the fiber of the levator ani.

The transversus perinei muscles are generally of less dimensions in woman than in man. They should be described practically as a muscular unit. They are variable in origin and dimension. Holl indicates that some of the muscles termed transverse perinei are branched bundles

jacent to that of the erector clitoridis, courses obliquely medianward and becomes inverted in the centrum, perineale intimately connected with the sphincter vaginæ, sphincter ani externus and trigonum urogenitale. The nerve supply of the sphincter vaginæ, erector clitoridis



MUSCLES OF PELVIC EXIT.

FIG. 13. Genitals subsequent to the removal of skin and superficial fascia. 1, ligamentum suspensorium clitoridis; 2, glans clitoridis; 3, musculus ischio-cavernosus; 4, orificium urethræ; 5, bulbus vestibuli; 6, sphincter vaginæ; 7, pudendo-vaginal gland; 8, musculus perinei profundus; 9, musculus obturator externus; 10, musculus transversus perinei; 11, musculus levator ani; 13, sphincter ani externus; 14, os coccyx; 15, gluteus maximus (Nagel after Savage).

of the levator ani, *i. e.*, parts of Holl's pubo-rectalis. When the transversus perinei muscles are distinctly developed, it may present a quill or little finger dimension, spheroid or flat band, intimately associated with the dorsal border of the trigonum urogenitale. It originates ad-

and transversus perinei arises from rami perinei of the nervus pudendus, and the vascular supply arises from the rami perenei of the arteria pudenda interna.

The topography of the transversus perinei presents points of interest in perineorrhaphy. The transversus perinei is a

landmark between trigonum urogenitale and anal region. The distal surface of the muscle is covered by fascia perinei, the dorsal free border of which surrounds the anal region. The proximal surface of the muscle rests on the aponeurosis of the trigonum urogenitale. It is intimately related with numerous perineal nerves, arteries and veins.

The pudendal group of muscles—sphincter vaginæ, erector clitoridis and transversus perinei—are of limited dimensions, and hence in contractile power. The erector clitoridis is a sexual muscle—aiding by its contraction to obstruct venous blood, and consequently inducing swelling, turgidity and erection of cavernous or erectile tissue. The sphincter vaginæ, though it constricts the distal vaginal orifice, is practically a sexual muscle, aiding by its constriction to obstruct the venous flow from the bulbus vaginæ, inducing swelling, turgidity and erection of this giant spheroid of collected veins. The transverse perinei maintain the tension of perineal fascia and the peritoneal relations of vaginal and anal orifices. It may be stated that the pudendal group of muscles become limited in dimensions, are also limited in their power to strengthen the pelvic floor or perineum; however, being intimately associated and interwoven with perineal fascia, they aid to consolidate and strengthen the pelvic floor in a minor degree. The anal group play the major role as muscular support of the pelvic floor.

[Written for the MEDICAL BRIEF.]

The Value of Faith.

BY R. C. CAVE,
St. Louis, Mo.

He who said, "We walk by faith and not by sight," stated a law of life which is true of all men, from the most ignorant peasant to the most learned philosopher. Faith is simply the conviction of the truth of something we do not know to be true—the assurance of the reality of something which lies outside the range of our knowledge. But the range of our knowledge is so limited that, if we did not base our action on the truth of something that lies beyond it, we would not act at all.

We can not know what a day or an hour may bring forth. Hence, every step we take out of the present into the future is taken by faith; every move we make toward the attainment of any end is made by faith. We do not know that we can attain the desired end; we only believe that we can, and are influenced by that faith to move toward it. The farmer sows his seed, believing that it will yield a desirable harvest. The merchant buys his goods, believing that he can sell them at a profit. The physician gives medicine to his patient, believing that it will prove beneficial. So, in all the affairs of everyday life, we walk by faith.

The same law holds in the realm of scientific research and discovery. The scientist observes, classifies, and compares facts, theorizes and experiments, reasons and deduces conclusions, but, his faculties being limited, he can not know that his information is complete or his reasoning free from fallacy, and, hence can not know that his conclusions are true. And when he has ascertained the order of nature with seeming certainty he can not know that this order will remain constant. "Obviously," says Mr. Huxley, "no amount of past experience can warrant us in anything more than a correspondingly strong expectation for the present and future. We find, practically, that expectations, based upon careful observations of past events, are, as a rule, trustworthy. * * * But, for all that, our highest and surest generalizations remain on the level of justifiable expectations; that is, very high probabilities." Hence, he who follows the light that science gives, walks by faith.

And it is even more manifest that we must walk by faith in our spiritual life. Our religion—whether it be blind obedience to an authority outside of ourselves or fidelity to the divine spirit within us; whether it be abject slavery to the doctrines and forms of the past, or an eager search for and progress toward better things—is but a reaching out after the unknown, prompted and directed by faith.

And faith not only prompts and directs the conduct, but it also moulds character. The civilization of an age or country is determined by its prevailing belief. When

belief in war is dominant, civilization is martial; when belief in commerce prevails, civilization is industrial. A prevailing belief in materialism produces an irreligious civilization, and a prevailing belief in the spiritual produces a religious civilization. Everywhere as the faith of men has been, so have been the men themselves. He who believes in money as the highest good becomes avaricious; he who believes in pleasure as the highest good becomes voluptuous. "As man thinketh in his heart, so is he."

It is only because faith thus influences life and moulds character that it has value. Considered in itself, it has neither merit nor demerit, and deserves neither approval nor disapproval. Apart from its influence on life and character, one faith is every whit as good as another. It is not faith, but manhood, that counts. We approve the good man and condemn the bad man, without waiting to find out what the one or the other believes. Thus, the intuitive moral judgment of mankind, giving expression to the sense of justice divinely implanted in the soul, declares that man ought to be approved or condemned, not according to what he believes, but according to what he is; and, hence, that faith is worthless, save in so far as it serves to lift the believer to a higher plane of manhood. The supreme question is not whether we believe in Moses or in Buddha, in Mohammed or in Jesus, in a personal God or in a divine principle, but whether our faith, whatever it may be, has so wrought in us as to incite us to just, generous, and noble lives, and make us pure and godlike in thought, desire, purpose and endeavor.

An Innovation.

A feature of the Ohio Valley Medical Association, to be held at Evansville, Ind., November 13 and 14, 1907, will be an evening session to which the laity are invited. Dr. Curran Pope, of Louisville, Ky., a notable orator, will deliver an address entitled, 'The Age in Which We Live." Dr. Brooks F. Beebe, of Cincinnati, Ohio, will deliver his address as retiring president of the association. We hope they will have a successful meeting and that much good will be accomplished.

[Written for the MEDICAL BRIEF.]

Recent Medical Progress in New York State.

BY SAMUEL S. WALLIAN, A. M., M. D.,
New York.

This State has, after long effort, much maneuvering, and much more or less bitter contention, set the pace, in the line of medical legislation, for the rest of the country, and, for that matter, for the rest of the unregenerate world.*

In effect it has permanently eliminated the question of sectarianism as regards the licensure of practitioners. As soon as the act just passed by the legislature has been officially put in operation, all medical coons will look alike to the non-partisan single Examining Board. No doubt the statute, as finally amended and passed, has faults; but the principle behind it is certainly based on reason and common sense. As experience demonstrates them lacking provisions can be added and unjust ones, if any there be, eliminated. This principle ought to have been enacted into law as soon as the Mayflower had landed her cargo and taken account of stock. There never should have been but one examining board, and but one standard of qualifications. Any other plan smacks of class legislation.

If a disagreement as to therapeutic means, methods and materials constitutes a school of medicine, then there are nearly as many schools as there are individual practitioners, since no two agree in their practice.

Sectarianism in medicine indicates superficiality of reason and narrowness of spirit. No man or set of men has the right to dictate what any physician shall use, or what he shall reject, in treating his patients.

The advocate of this or that exclusive theory or dogma to the exclusion and condemnation of all other rules, systems and theories is always a prejudiced bigot whose opinion on medical subjects is not worth the drop of ink expended in writing it out. He neither reasons himself nor comprehends the reasoning of others.

* Germany, France and Switzerland have always regulated their medical practice through single examining boards.

Every so-called "school" of medicine has had its mission, and added some valuable facts, to have their bearing on other facts applied to the art of healing the sick. This is true, even when applied to mystics, mental healers and Christian scientists, who are neither Christ-like nor scientific.

Medical colleges should be known simply as medical schools, without being tagged as the exponents of this or that "pathy."

Nature knows no "law of cure" save that of ceasing to transgress. She provides not in any case panaceas, but always inexorable penalties.

To cite a few of the nicknames and pseudo "systems," as they are bandied about by laymen and some doctors, "allopathy" never had other than an imaginary existence. It was a trumped-up nickname, fathered by Hahnemann. Homeopathy, eclecticism, hydrotherapy, physiotherapy, radiotherapy, serotherapy, mechanotherapy, osteopathy, and all the rest of the numerous tags are linguistic excrescences on the body of real medical science, ranging all the way from soft corns to sarcoma and chalky deposits in its joints.

If you or I know anything about the human organism, the nature of disease and the laws of living; if we have learned something of value in connection with the eradication of diseased conditions, it is our moral duty, as well as our professional business, to communicate our knowledge to the world, and to make our acquired skill available in alleviating human suffering and saving threatened lives. There is no earthly need of organizing our observations and deductions into a one-sided "system," and unstintedly denouncing those who do not see as we see and practise as we practise. Let us modestly advance what we have learned as fragments of the great whole of medical science.

It is high time that the medical world had outgrown and outlived every form of "pathy;" time that every student of the art of healing, which Byron styled the "Art of Killing Pain and Patients," should indulge no aspirations beyond that of becoming a true physician, broad enough to see all sides of a medical proposition, and intelligent enough to discern and adopt what is sensible, and avoid what is silly. When all medical men shall have fairly learned this rational lesson they will have earned the right to be called rational students of rational medicine, instead of petty partisans of some more or less inconsistent and incomplete schism. They will also earn the honor of being esteemed by their colleagues and co-workers in other professions as honest searchers after physiological, pathological and therapeutic truth, regardless of its source, or of its popular label.

The State of New York is to be congratulated on the stand she has at last taken. It is a step in the right direction, and if, as charged in some circles, surreptitious provisions were foisted upon the framers and sponsors of the medical act, just passed and signed by the governor, their injustice will appear, and future legislatures will unquestionably cull them out. Certainly all progressive medical men have cause to rejoice, while they recall Tennyson's "One law, one element, and one far-off divine event toward which the whole creation moves."

509 Fifth Avenue.

[Written for the MEDICAL BRIEF.]

Another Treatment for Cancer of the Stomach.

BY DR. A. ROSE,
New York City.

While we are awaiting reports of the results with Jacobi's methylen-blue method to treat cancer of the stomach, we learn of a new remedy recommended with the same praise as Jacobi's. Dr. E. Funke (*Medicin. Blätter*, 1906, No. 44) speaks of remarkable results in several cases of cancer of the stomach, by means of brewers' yeast, taken fresh from the brewery (perhaps our Fleischmann's yeast cakes might answer as well). He writes the appetite, the digestion and the general condition improve very soon and tumors disappear. The treatment, a tablespoonful of brewers' yeast three times a day, before meals, has to be continued for, at least, a month.

[Written for the MEDICAL BRIEF.]

Begging the Question.

BY T. A. SMURR, M. D.,
Ottawa, Ill.

For genuine unselfishness and personal self-abnegation for the good of their fellowmen has ever been the proud boast of our profession, and the midnight oil has been burned for ages that we might bring to the suffering world, not alone a panacea for their sufferings, but a prophylaxis for their every fil, so that life, health and happiness should be theirs galore, and we, relieved from their tales of woe, might make an equally precarious living in some congenial spot-cash pursuit. But the world persists in being sick, miserable, and dying, despite our most diligent, persistent and unselfish efforts.

Anent all this, a Scottish chiel sometime said of the profession:

> "Oh that some power the gift wold gie thee
> To see yesels as ithers see ye."

Then I'd been spared from giving you this unfriendly whack.

One of these big-gun professional philanthropists (in the memory of men still living) announced through the public print (so all might know and profit thereby) that he had discovered and identified the bacillus of tuberculosis, and, further, that he had a perfect cinch on him, and that by the use of his wonderful legacy to the medical profession, the world would be freed from that dreaded bacillus. The doctors, and the suffering and the dying all around the world held their breath (so to speak) believing that this announcement would be followed in a few, a very few, hours by the free gift of a full-working formula for this sovereign remedy, this salvation for the white-plague stricken world; and how was it given? Oh, a syndicate of capitalists was organized to see that the remedy was properly and safely concocted, and a protective tariff assessed, so as to protect us from a too lavish and wasteful use of a good thing, and, unintentionally, protected us from being seriously duped. Well, it died in borning, or soon after.

But not to be outdone, the progressive Yankee doctors, together with the State board of health, get out their microscopes and proceed to get wise, and soon run the root of this plague to earth, finding it in the poor, generous, patient and long-suffering cow, and they hasten to assure us that ninety per cent of all our dairy cows are so badly diseased that it was a divine miracle that any of us lived after having used butter, cream or milk, or even looked a fine, fat heifer in the face evening and morning at milking time. A generous anti-plague appropriation was secured, and an active professional campaign of education, and tubercular eradication was inaugurated, and the dear public were soon enlightened and taught that anything from a boil to a stone-bruise might be, or become, tubercular. Many herds of fine-bred, well-kept, fat and seemingly sound cattle, were condemned and ruthlessly slaughtered, and had it not been that the appropriation ran out, the great State of Illinois, in place of being a banner State for dairy products and beef cattle, would now be millions to the bad, and cattleless; and here endeth the second reading or lesson.

But the generous, self-sacrificing syndicate of professional knaves were not yet done with us, and operating through this same State board of health (how big that sounds) appointed through professional superiority or fitness? Oh, no; through political pull, have gotten another appropriation, and all over the States are to be seen the white tents of the isolated aggregation of white-plague smitten dupes; super nutrition for a time offsetting concentration of infection and depressing environment, and for a time inspires a hope for betterment, and thus the game is played, and will continue so long as the appropriation lasts, or able clients pay fat bills for fresh air. When, like in the case of the cow, it will become ancient history, and some new life-saving philanthropic fad must be devised and foisted on the gullible public. But what are the odds whether you die from open-air treatment or Christian Science, so long as you are hopeful and happy, and there still flows a stream of shekels from your pocket to pay the fiddler.

[Written for the MEDICAL BRIEF.]

Influenza and Intermittent Fever.

BY JOSEPH D. HARRIGAN, M. D.,
New York City.

NO. II.

Continuing the comparison, commenced in the June issue of the BRIEF, of the symptoms of these two diseases, we come to the consideration of those pertaining to the changes in the liver and the spleen.

Quoting from Professor O. Lichtenstern (Nothnagel's Encyclopedia, American Edition, page 668), on influenza, we find the following:

"As regards influenzal hepatic disease, the reports are mainly pathologic. Hyperemic conditions, parenchymatous degenerations, cloudy swelling, small-celled infiltration, microscopic tissue necrosis and formation of thrombus are mentioned."

The conditions for the formation of abscess of the liver, of which Kraunholtz and Cimbali have observed a case, are present in the severe forms of hemorrhagic-ulcerative enteritis.

Reynal describes a case of "icterus gravis" after influenza.

Experiences concerning the frequency of icterus in influenza are very varied.

It is mentioned by Lancisci (1709), and by Huxham (1737), as an occasional occurrence—"some fell into jaundice"—as well as by many later authors (Stoll, 1775, and others).

Peacock, in his description of the epidemic of 1847-48, remarked that "a frequent symptom was a feeling of heaviness and pain in the right hypochondrium, which was generally combined with a certain amount of icteric discoloration of the conjunctivæ or the skin in general."

Raeumler observed in the last pandemic: "Icterus, or at least icteric, discoloration of the sclera in 88.5 in males and 76.8 per cent in females;" that is, practically, always.

Rota (Bamberg) and Bergmann (Pottenstein) saw "numerous cases of icteroid discoloration of the conjunctiva and skin, as well as marked catarrhal jaundice," and the medical officer for the district of Merseburg reports, as the result of information supplied by the physicians of his district, that "in all the febrile cases, whatever the form of the disease, there was slight jaundice of the skin and eyes, as well as bile-pigment in the urine."

One feels tempted almost, after reading the description above of icteroid influenza, or, rather, of influenzic icterus, to wander into the domain of yellow fever and compare it with influenza, but—"sufficient to the day is the evil thereof"—the comparison will keep.

Passing to intermittent fever we find in the simple type, according to Mertz (Ziemssen's Cyclopedia, volume II): " * * * the skin is generally hot and dry, the complexion pale and muddy; growing yellowish and slightly icteric about the sixth to the eighth day."

And in the masked intermittents the same author says: "Masked fevers may, furthermore, manifest themselves in the form of intermittent hyperemia, hemorrhage, edema and inflammatory disturbances of nutrition. Among the latter are * * * swelling * * * of the liver * * * "

"* * * Intermittent jaundice also is sometimes encountered. During the year 1859 Martin saw a whole epidemic of intermittent jaundice, of the tertian type, among the French garrison at Pavia. On the fever days, the spleen and liver being swollen, the discomfort was greater, and the urine, conjunctiva and skin were darker-colored than on the days that were fever free * * * "

Coming to a consideration of the pernicious forms of intermittent, the same author says:

"It remains for us to notice the *icteric* form of malarial fever. It is usually developed from a simple intermittent, and prevails endemically in certain localities, as on the Island of Madagascar and on Nodso Bè. It often seems to give certain warnings of its approach, twelve to twenty-four hours in advance, such as headache, nausea, chilliness, and sometimes a slight icteric coloring of the conjunctiva or of the alæ of the nose. The actual attack always begins with a violent, long-continued chill, during which the icteric color either first begins, or, if already present, grows more intense, spreads over the entire body, and soon assumes a saffron or olive hue. Intense nausea is

now felt, with copious vomiting of bile, and often bilious diarrhea."

Pathologically considered, the author states that "the liver is often enlarged, in acute cases hyperemic, the parenchyma swollen and soft; sometimes, especially in the pernicious fevers of the tropics, it is studded with numerous apoplectic spots, or with disseminated and confluent inflammatory and purulent collections. In the icteric form the organ is very large, the gall-bladder usually filled with thick, dark-brown bile."

All that is stated here concerning the changes wrought in the liver in intermittent fever, together with the symptoms indicative of them, can be reiterated most emphatically of identically the same manifestations and conditions found in influenza. The only distinction (without a difference) is that arising from the varying degrees of concentration, and, possibly, also, of intensity of the poison factor in the matter. This, together with the varying extrinsic circumstances of purely chemical and electro-chemical environments, that go by the name of climate, constitute factors powerful enough, withal, to work certain changes in the accidentals of epidemic disease, modifying some, distorting others, but never eradicating the essentials that form the ground-work and frame-work upon which all depend.

Passing to the spleen in intermittent fever we find the same congestive and inflammatory developments that characterize the changes just now depicted as occurring in the liver. Hertz says:

"In most cases of pernicious intermittent, the *spleen* is enlarged, reaching three or four times its normal size. It is hyperemic and softened, sometimes consisting of nothing but a sac filled with a black, bloody fluid.

"Infarctions are not very rare, which may result in gangrene or the formation of abscess (cases reported by Scholz, Duchek and myself), and rupture of the spleen, with fatal hemorrhage into the cavity of the abdomen, may occur.

"It is not uncommon to find discolorations and thickening of the capsule of the spleen, and adhesions to neighboring organs.

"Under some circumstances, when death occurred during the first or second attack, the spleen has been found unchanged, this condition being particularly observed by Girard in the malignant fevers prevalent at Rome. * * *

"The 'ague cakes,' with which every one has long been familiar, are the results of frequent relapses of intermittent fever, lasting for a long time, and of primary chronic infection of a high grade. They consist of firm, tough, slaty tumors, presenting a smooth surface on section, rich in pigment matter, of enormous size; often fifteen or sixteen times the natural size of the organ, of the shape of a cake, usually provided with a thickened capsule, and attached by adhesions to the surrounding parts or organs.

"They represent either simple, hyperplastic conditions or amyloid degeneration. Leucemic tumors of the spleen seem to be of more rare occurrence, inasmuch as not a single case of the kind fell under my observation in Holland during six years; and Tomasi, during four years, within which time he saw very many tumors of the spleen, could never demonstrate any one of them to be leucemic. Occasionally the spleen may diminish in size again after having been enlarged; in that case it is firm, tough and atrophic, with a large increase of its trabecular tissue, and almost entire disappearance of its pulp."

With regard to the symptoms accompanying the pathological conditions noted, Hertz says:

"Tenderness and actual spontaneous pain in the spleen, or pain on taking a deep inspiration, or on coughing, sneezing, moving the body vigorously, or producing pressure over the organ, together with enlargement of the same, are phenomena worthy of attention in malarial fever. Duboue and Derblich, however, are mistaken when they represent the first symptom as being seldom absent, and regard it as of great diagnostic value, inasmuch as in many cases it may be sought for in vain, especially in all those of a chronic character. It arises from the great and rapid stretching of the spleen during the paroxysm, and is to be found, above all, in children and young persons during acute attacks, being less noticeable

in older persons, with thicker capsules that are not so easily distended. When the spleen has, furthermore, formed adhesions to neighboring organs, tenderness in this region, on moving or shaking the body, may remain persistent.

"Enlargement of the spleen from the most insignificant to the most formidable in degree, is a far more constant condition. If the enlargement is not great, the diagnosis must be made by means of percussion, as the tumor does not extend below the margin of the ribs. In more serious enlargements, however, the organ extends, to a greater or less degree, into the cavity of the abdomen, occupies a more vertical position, and may fill a great portion of the left side of this cavity. * * * Swelling of the spleen is even found in the new-born infants of mothers suffering from malarial fever. In ordinary intermittent fever the enlargement sometimes takes place as early as during the prodromal stage; usually, however, not until the stages of chill and heat, receding again during the sweat and the period of apyrexia. * * * The very evident and almost constant way in which the spleen is involved in intermittent fever, suggests the idea that the two are very nearly related. With our present knowledge we can no longer attribute the swelling of the spleen to an over-filling of the organ with blood during a chill alone, as it may attain to the very largest size in chronic infection without chills. Piorry reverses the old proposition, and designates intermittent fever as a result of disease of the spleen; Meckel and Duchek also declare the spleen to be the primary seat of disease.

"On the other hand, again, according to the reports of Jacquot, Saurier and others, people are said to die of malarial fever in Africa without the slightest swelling of the spleen. A singular case is also related in which a man received an extensive wound of the wall of the abdomen on the left side, through which the spleen escaped; as it could not be returned, it had to be removed. The patient recovered from the operation, and had malarial fever afterwards, just the same as before, although eventually a *post-mortem* examination showed nothing but the shriveled rudiment of a spleen left."

Passing now to consider the spleen in influenza, we find, according to Professor O. Leichtenstern, in Nothnagel's Encyclopedia (malaria, influenza and dengue, p. 669):

"In influenza, as a rule, the spleen is but rarely so much increased in size that a distinct enlargement can be demonstrated at the bedside. This applies particularly to the immense majority of mild cases. But in severe cases (about fifteen to twenty per cent), influenza, simple, as well as that with complications, gives rise to definite splenic enlargement, which can be determined with certainty during life, and whose existence is frequently confirmed at the *post-mortem* examinations. But the statements regarding the condition of the spleen in influenza are remarkably contradictory."

While the pathologists, Birch-Hirschfeld, "generally found no changes in the spleen," and Jürgens "had seen no splenic tumor," Ribbert, on the other hand, found "the spleen occasionally enlarged to several times its ordinary volume, and in all (eight) some enlargement."

In agreement with this author and other pathologists (Wallis), we, too, occasionally observed marked increase in the size of the spleen in a number of *post-mortem* examinations; so, too, Drasche found "in all influenzic cadavers, acute, and sometimes considerable enlargement of the spleen," while Winowgradow found it only twice in thirteen autopsies.

Kuskow found it enlarged twelve times among forty autopsies, generally but slightly; in the remaining twenty-eight cases the spleen was smaller, and "often considerably less in size."

After enumerating many authors and observers whose results of observation were on the negative side as to enlargements, the same author states:

"In marked contrast to these statements are numerous others, according to which the influenzic splenomegaly is of very frequent occurrence.

"Sokolow and Kernig describe enlargements of the spleen as a constant feature. It was observed in the city hospital at Dresden in 80 per cent of the cases; in Hamburg in 56 per cent; by Baumler (Freiberg) in 63.5 per cent, and by Schnaubert (Petersburg) in 39 per cent.

Goll (Zurich) describes it of very frequent occurrence. Guggenheim (Wurtzburg), in 25 per cent; Anton (Wurtzburg), in 16 per cent; Aufrecht in 20 per cent. We have found it in 14 per cent; Gutmann (Nuremburg), in 11 per cent; Krehl and Fischer in 10 per cent.

"In the French republic the frequency of enlargements of the spleen is almost invariably mentioned by Potain, Chantemesse, Guyot, G. Sée and Mangoubi."

We might thus continue indefinitely comparing the symptomatic and pathologic facts relative to these two diseases, and it would not be at all extravagant to claim that for one and all in the one case we would find duplicates in the other. But a sufficient number of points has, it seems to the writer, been offered proving indisputably that the essentials of these diseases are identical.

What really clouds the whole matter, as stated by me time and again, is the promiscuous, indiscriminate and unwarranted use of the word "complications."

A disease may have all the symptoms, almost to a dot, of another, and be considered as an entirely different affection, simply because of the greater or less prominence of one or two of the pathological developments occurring in the one case as compared with the other.

Thus, for instance, in a group made up of, say, for example, coryza, bronchitis, laryngitis, esophagitis, enteritis, hepatitis, nephritis and splenitis, should the bronchial symptoms seemingly be predominant, we call that group of symptoms, perhaps, influenza, "complicated" by splenitis, nephritis, etc., but should the enteritis, splenitis, etc., hold principal place, we may refer to the group as, if you please, malaria, "complicated" by bronchitis, laryngitis, pneumonitis, etc.

This is anything but scientific.

When we consider the wide variations in the symptoms of these two diseases, in different epidemics, and even in the same epidemic, it is ridiculously absurd.

It would seem to me far more scientific to take the simplest forms under which these different groups of symptoms occur, and from these simplest forms of epidemic disease, work our way forward towards the more complex, eventually advancing —without eliminating these simplest forms, but rather absorbing and utilizing them, to the most complex varieties under which epidemic disease manifests itself.

In other words, the most complex and deadly forms of epidemic disease contain within them all the essentials that go to make up the less complex and less deadly, down to the simplest and most trivial. Thus the plague, black death, etc., have, as part of their composition, *malaria* and its simplest progenitor, *influenza*. The whole scheme of epidemic disease is analogous to that of the science of mathematics, a building up, if you might say it, from primary principles.

Just as in the latter, the most complex operations have, intimately bound up in their intricacies, the simplest forms of arithmetical expression, so, in the former, the greatest combinations of symptomatic and pathologic phenomena, contain as a *sine qua non*, most easily understood, simple essentials.

Applying this theory to the two diseases under consideration, we would expect to find, from the perfect similarity of nearly all the symptoms present, and from the agreement of the pathological findings, either the two diseases to be identically the same, or else that one was a simplified form of the other. This would be in line with the differences existing between the malaria of stagnant fresh-water marshes and that caused by the salt-water marsh exhalation. It is a well-known fact that the latter form is the more severe of the two. That would bring in the point that, if the former is caused by the exhalations of carburetted hydrogen, the latter must have entering into its causation some other form of hydrogen—possibly chlorinated—from the decomposition of the chloride of sodium.

Thus we would have simple malaria, due to carburetted hydrogen; salt-water malaria due to the same+chlorine, or, possibly, chlorinated hydrogen alone; pernicious malaria, due to some similar form of hydrogen+environment, chemicals, etc., etc.

Now, if influenza and malaria are identically the same, only differing in degree of severity and extent of pathological changes, we must expect to find an etiological factor of very close kinship in the

former to that responsible for the latter disease.

In fact, we would expect to find some other combination of hydrogen, perhaps ammoniated.

How it is possible for the atmosphere of the earth to become surcharged with hydrogen, and thus, entering into combination with the ammonia, or other constituents found therein, to produce the widespread disturbances to health that are identical almost with malaria, and known to us by the name of influenza, it will be necessary to leave to a future paper for consideration.

668 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

Trichinosis.

BY J. W. MCCALL, M. D.,
Huntingdon, Tenn.

The following is a reprint of cases of trichinosis from the *State Board of Health Bulletin*, Nashville, Tenn., published in that journal March, 1886, page 113, with an interesting sequel of microscopical examination of muscular tissue of one of the patients:

"TRICHINOSIS IN CARROLL COUNTY.

"HUNTINGDON, TENN., March 26, 1886.

"*Dr. J. D. Plunket, President State Board of Health, Nashville, Tenn.:*

"DEAR SIR—As per request, I make the following report:

"On the 26th of December, 1885, I was called to see the family of Mr. James Espy, seven in number—father, mother, two daughters and three sons, ages ranging from eighteen to fifty-eight years—living three miles west of Huntingdon, on the farm of H. C. Townes, Esq., of this place. I found Mr. Espy, the father, confined to the bed with considerable fever, some edema of the face and some muscular soreness. He stated that he was taken sick, five days previous to my visit, with vertigo, nausea and vomiting and chilly sensations, followed with fever. He thought the attack was brought on by overwork in a clearing in a creek bottom close by. It being a prolific spot for the development of malaria, I diagnosed his case one of that character, and so directed the treatment. On the 30th, and nine days from the commencement of the sickness of the old gentleman and four from my first visit, I was called to see the family again, and, to my great astonishment, found them all sick but one, out of seven. I found, also, that the diagnosis in the first case was incorrect, and it was not until the next visit that I become fully satisfied, by the exclusion of other diseases, of what seemed to me to be the true nature of the disease in the family—trichinosis—the result of eating insufficiently-cooked sausage infested with trichina spiralis.

"They were attacked from the 20th to the 24th, but did not report their cases to me at my first visit on the 26th. Two were taken with nausea and vomiting, accompanied with diarrhea, the other three had uneasiness and uncomfortable sensations in the alimentary canal, unaccompanied with vomiting and diarrhea; unpleasant sensations and pain in the head, with vertigo, were common to all. The most prominent symptom present was the great edema of the face and eyes, with apparent conjunctivitis, soreness of the flexor muscles, and edema of the feet and legs, coming on from the sixth to the tenth day from the commencement of the disease.

"It is truly a strange spectacle to enter a house and find every member of the family presenting the appearance of having been in deadly conflict with some species of the genus vespa.

"The muscular soreness and edema were not altogether so great in the cases that had vomiting and diarrhea in the commencement as those that were free from it. The edema in the feet and legs was three or four days later in making its appearance than in the face and eyes. The calves of the legs, the posterior portion of the thighs, and the anterior aspect of the upper extremities, were involved. In fact, the flexor muscles generally seemed to be the preferred site of the little depredator.

"One of the cases, the mother, had extreme soreness of the abdominal muscles, and great edema in the hypogastric region, extending to the vulva, which has scarcely now, eighty-eight days from the

attack, resumed their natural condition. One of the patients had soreness in the extensor muscles, that was in a slight degree in the thigh. There was no soreness nor stiffness to be found in the muscles of the back, back of the neck, or extensor muscles of the upper extremities. One complained of slight pain in deglutition, but I was unable to determine whether it was muscular or soreness on the inside of the throat from the effect of cold. The deeper structure of the eyeball appeared to be tender on pressure. The pupils were generally slightly dilated. Fever was present in all, varying in degree from an inconsiderable pyrexia in the evening, in those of a milder form of the disease, to a marked and continued fever of a remittent typhoid type, if I may be allowed the expression, in the cases of graver character. The temperature, as far as noted, was 99° to 102° F.; circulation, ninety to one hundred and thirty per minute; respiration, slightly accelerated. I will just say here that the frequency of the action of the heart was noticed as a prominent symptom throughout the disease; and even now, at the eighty-eighth day from the attack, when the young men are able to plow, the pulse rate is ninety-six to ninety-eight. The tongue was more or less coated, varying in color and extent from a normal to a slightly abnormal light to a brown color, and having a longitudinal fissure in the center, or mesial line, and indentations on the edge at the point pressed against the teeth, conveying the idea that it, too, was edematous.

"By the usual test, the urine was found to contain no albumin, was highly colored and scant in quantity, until the approach of convalescence, at which time it resumed its natural color, with considerable excess over the normal amount discharged in health. It continued to flow freely until that apparently anasarcal edema of the lower extremities had quite subsided.

"It should have been stated before that the seventh and last one of the family, a daughter, was taken sick six or seven days after the first, the disease making its appearance as in the first case, though in a modified form. The edema of the eyes and face, soreness of the flexor muscles, followed by edema of the feet and legs, were not so marked; the symptoms were sufficiently prominent, however, to make the diagnosis clear and unmistakable.

"For three weeks two of the young men were unable to dress or undress themselves, the muscular soreness was so intense, nor were they able to turn themselves in bed without help; notwithstanding this, when once on their feet, they were able to walk around the room and sit up some every day.

"After the first few days their appetites were generally ravenous, occasionally alternating with nausea and vomiting; the most of which was, I believe, justly attributable to excess in eating and drinking. They were thirsty from beginning to complete convalescence. From about the twelfth to the twenty-second day of the disease there was but little change in the condition of the more violent cases, except the edema had measurably left the eyes and face, and had increased considerably in the feet and legs, and had extended to the hips. The milder cases I consider decidedly convalescent at this date.

"On the twenty-fourth day I visited my patients again, found three of them on the bed, the other four sitting around the fire, presenting a pitiable appearance, indeed. Pulse varying from ninety to one hundred and twenty-six per minute; temperature, 99° to 102° F. One had itching sensation in the skin, with a tendency to effloresce under pressure or friction. One complained of a sensation as though cold water was being sprinkled over the surface. The other five were exempt from skin trouble. Two had profuse perspiration; one of these two cases, a daughter, who has tuberculosis, was able to be up and attend to some housework, and was thought to be improving up to the time she was taken sick with the present disease. Her feet and legs were swollen to an enormous size, extending to the hips and lower portion of the abdomen, having every appearance, except the extreme tenderness, of a regular anasarcal effusion, clear and pitting on pressure. In this case the urinary secretion was not excessive in quantity in the convalescent

stage of the disease, as stated in the other cases. Free perspiration continued constantly, day and night, for six weeks, until the edema had entirely disappeared from the lower extremities. She is again improving from the lung trouble, and has resumed the use of codliver oil.

"The treatment was not founded upon any preconceived idea gleaned from the text-books on the subject. They have none, practically. It was founded upon a commonsense view that a disease resulting from a parasite must be treated, if treated properly, with a remedy that kills parasites—a parasiticide—and upon this theory the treatment was based.

"It is a well-known fact among medical men that sulphur and its numerous compounds stand at the head of the list of zymotic medicines, and having unbounded confidence in the efficacy of these remedies in the treatment of parasitic diseases, malaria not excepted, I determined to select one of these compounds, and give it a thorough trial in these cases. The patients were all put on five-grain doses of the sulphite of soda in solution, every four hours, with direction not to disturb their rest during the night to administer the medicine. This treatment, and this alone, was continued from three to five weeks, or until the commencement of convalescence, at which time it was gradually withdrawn. The improvement was slow, especially so in the more violent cases. While all of the family, except the young lady with tuberculosis, are up and able to do some work, two of the young men are not yet able to mount a horse from the ground, because of the soreness and stiffness of the hips, and it is now eighty-eight days since the attack.

"I attribute the recovery of this family to the application of the proper remedy to the special pathological condition of the cases, the timely and constant use of the sulphite of soda, or, in other words, to the soluble sulphur contained in the compound, killing the young trichinæ, not only in their embryonic or infantile stage by coming in actual contact with them while in the alimentary canal, but by meeting them in childhood in their transit to and after their arrival at their distant muscular home.

"On receiving the report from the State Board of Health of the examination and finding of trichinæ in Nos. 4 and 10 of the eighteen suspected specimens of pork sent to Nashville, I went to Mr. Espy's, and compared these numbers with those on the different pieces of meat which I numbered at the time the specimens were cut out, and found them to be the hams of the hog whose history and pedigree is here appended.

"An investigation of the history of this hog developed the following facts:

"She was raised in Carroll County. For the first six or eight months she lived in the horse lot, around the corn crib and stables, afterwards she ranged in the creek bottom mostly. She was kept for breeding purposes, and was four years old when killed. In January, 1885, she had pigs, and after a week or two they all died, dropping off one at a time. Shortly after this she became very poor, so much so that Mr. Espy thought she had cholera, but did not know as to that positively. After a time, she improved in flesh, and in April, 1885, she was spayed, and was, to all appearances, as healthy as any one of the herd, and when put up to fatten, gained flesh as rapidly as any of the hogs with which she was penned. Mr. Espy slaughtered her the 15th of December, 1885, but observed nothing unusual in the meat.

"She was one-half Jersey Red, a very large, bony breed of hogs; the other side was Berkshire and Poland-China. A. G. Hawkins, Esq., of this place, bought her grand sire, a Jersey Red hog, from Thomas S. Grundy, of Springfield, Ky., seven or eight years ago. I am, sir,

"Very respectfully yours,

"J. W. McCall, M. D."

The foregoing reproduction of the report of seven cases of trichinosis treated successfully in the Espy family, in 1886, with the view of connecting that report with the sequel twenty-one years afterwards, which follows:

I am now, March 15, 1907, able to report the result (a confirmatory proof of correct diagnosis) of a microscopic examination made by Dr. Wm. Litterer, Professor of Pathology, Medical Department, Vanderbilt University, Nashville, Tenn.,

on the 11th of March, 1907, of muscular tissues taken from the gastrochnemius and biceps flexor cubiteus of the old gentleman of the Espy family twelve hours after his death, which occurred March 2, 1907, from a stroke of paralysis, age eighty-three years.

I selected the specimen for examination from the flexor muscles from the fact that they seemed to be the main seat of the disease, judging from the amount of soreness present at the time of their sickness. To verify this fact specimens of muscular tissue from the quadriceps femoris were also submitted to examination under the

existed, no one knows how long. In
while an operation was being perfo
on a lady's jaw, a number of gra
or small cysts were discovered by th
erator in the exposed muscles, w
upon investigation, were found to co
a small worm, which is now called
ina spiralis, from its shape.

In the fifties experimenters in Ger
investigated the history and habi
this parasite. Infected meat was
to the pig and other domestic ani
which became infected with the di
In 1860, an epidemic broke out in
den, Germany. Every member of

microscope. An abundance of trichinæ were found in the three specimens examined, incapsuled in a cyst and calcareous shell, where they have been in a dormant state over twenty-one years, and now ready to pass through another cycle of life if favorably located in the stomach of some living animal, the secretions of which digest the cyst and dissolve the limey shell, and give vitality and growth to its occupants when set at liberty. (See plate.)

The subject of trichinosis should interest every one. It is a very fatal disease and easily prevented. It has doubtless

family took something like mu
rheumatism; one of the members
and upon a *post-mortem* examinatio
volunteer muscular system was fou
be full of trichinæ.

Virchow, the great scientist, ad
tered some infected meat to a r
which became infected with trichin
died in four weeks. The infected
of the first rabbit was given to the s
rabbit, which died in about the
length of time. The infected meat
second rabbit was given to a third r
with like results, proving, beyond
that trichina spiralis can be transm

indefinitely from muscle to intestine, and from intestine to muscle *ad infinitum*.

When trichinæ have been domiciled in the muscular tissue for a number of years, it is not so easy to determine their identity, as the cyst enclosing the worm has, by this time, an earthy crust deposited within, which is said to be phosphate of lime.

When infected meat in this state is taken into the stomach, the cyst and calcareous deposit enclosing the trichinæ are digested and dissolved by the secretions of the stomach, and by the time the worm reaches the duodenum it is divested of cyst and earthy capsule. The intestines are now found to be crowded with the late arrivals of trichinæ from the stomach, and in five or six days they have reached adult size and age in the small intestines; the male is one-eighteenth and the female is one-eighth of an inch long, and they are copulating.

Trichinæ are viviparous, and in three or four days the female is giving birth to her brood, numbering from three hundred to two thousand young, active trichinæ in the small intestines, measuring in length from one one-hundred and fortieth to one one-hundred and twentieth of an inch. But little delay is made after their birth in penetrating the walls of the bowels, causing great irritation, pain and soreness of the bowels, nausea and diarrhea.

In their transit from the alimentary canal to their muscular home there is but little change in their size and shape.

How the young trichinæ get from the alimentary canal to the distant voluntary muscles, and in what issues they are domiciled after their arrival, are mooted questions. One thing is sure, they make a safe journey to the most distant voluntary muscles in the system, whether through the circulation of the blood, as some contend, having the ability to penetrate the walls of the blood vessels, the same as the intestinal walls, or make a slow trip through the flesh, after passing through the walls of the intestine. The latter position is strongly supported by the amount of soreness and edema of the entire body being traumatized by their passage through the tissues.

After eating meat infected with trichinæ the symptoms appear from two to four days, sometimes as late as the seventh day—sick stomach, pain and soreness in the bowels, with diarrhea; the more violent the diarrhea in the early stage of the attack the more favorable is the prognosis, as a general thing. On the contrary, if the diarrhea is slight or wanting, it gives the trichinæ time to penetrate the walls of the bowels and make their escape. There is often vertigo and headache. Later, there is general soreness and swelling of the entire body. The soreness and edema of the whole muscular system, simulating muscular rheumatism, is calculated to mislead the unsuspecting in diagnosis. Usually the pulse is rapid, skin hot and dry; in some cases, however, the skin is moist throughout the attack. Temperature ranges from 100° to 104° F., owing to the amount of lesion or irritation present in each case. In protracted cases typhoid symptoms may supervene. Difficulty in deglutition is present in some cases.

From ten days to three weeks is considered the critical period of the disease. If the disease has been diagnosed early in the attack, the very best thing to do is to administer a brisk cathartic, combined with a parasiticide, say thymol, to cripple or kill the parasites, and rush them out of the alimentary canal at once, giving them no time to commence their operation of boring through the walls of the bowels, and making their escape.

If the nature of the case has not been diagnosed in the early stage of the disease, or until, possibly, the trichinæ have passed through the walls of the bowels, drastic purgation is contraindicated; a parasiticide or antiseptic should be given throughout the attack. The bowels should be kept open in the latter stage of the disease with castor oil, to clear out the ptomains and putrescent debris of the alimentary canal. If there be prostration, debility or any other intercurrent trouble, treat as in other cases of like condition. There is no prophylactic, except through cooking of the meat we eat at a temperature of 212° F.

The host of trichina spiralis is the rat. It is said that about two per cent of the hogs that are slaughtered are infected.

All dead carniverous animals and fowls should be cremated.

The mother trichina, after giving birth to her numerous progeny, dies and passes off in the feces, accompanied by her male companion.

The abode of this parasite, after reaching the voluntary muscles, is a fusiform tube, lying among the muscular fibers, having the contour of what might be a degenerated muscular fiber, and, in all probability, is.

The habitat of the young trichinæ is the voluntary muscles only. They are never found in any other tissue of the body, and, invariably, breed in the alimentary canal.

A patient who has had trichinosis and recovered has never been known to have any trouble afterwards attributed to that disease.

I have been Mr. Espy's family physician for over forty years, and have not at any time detected any trouble since the attack of trichinosis in any member of the family that would lead me to even suspect the dormant trichinæ as being the cause.

[Written for the MEDICAL BRIEF.]

Organic Veil.

BY B. P. WATTS, M. D.,
E. Galesburg, Ill.

I have been in the practice of medicine thirty-five years, and have attended something over two thousand cases of obstetrics, and have so far failed to find what is denominated organic veil; however, my daughter, who has been in practice but three years, came in last evening with a perfect veil obtained from a little girl baby born on that occasion. Dr. Randelson, an old physician of this place, has one, the only one he was lucky enough to meet with in almost fifty years' practice, and, strange to say, the veil he has was taken from the face of an uncle (now eleven years old) of this little lady that was born yesterday, and from whom my daughter obtained the veil she has. Is there any heredity in this, or is it purely accidental?

What do the many brethren say?

[Written for the MEDICAL BRIEF.]

The Preventive and Curative Diseases of Babies and Children, with Dietetic Suggestions in Health and Sickness.

BY ELLA A. JENNINGS, M. D.,
Brooklyn, N. Y.

Every busy physician is greatly perplexed by the severe sickness of young children.

They can diagnose all right, but the prognosis don't always come out as expected.

Children have a way of converting hopeful into hopeless cases, in the shortest possible space of time; but it is equally true that apparently hopeless cases can as speedily change to resolution.

I have sat by the bedside of babies where it seemed impossible that they could live for an hour, and in two hours they were out of danger.

Babies are very susceptible to magnetism, and the suggestion of those about them. Often it is necessary to exclude a weeping mother, who can not control herself, and substitute a trained nurse, or some one who has self-control.

Babies do a great deal of thinking; they are so natural they get at the truth of things. My own baby girl, before two years old, often said: "I tant tell why, mover, but I feel it's so."

Very young children manifest repugnance or attraction, and their feelings should always be respected.

My own baby never cared for her wet nurse, a really beautiful Swedish young married woman, but would take the breast and turn her face toward me, and as soon as done nursing plainly indicate she wished me to take her.

Children are greatly injured by enforced association with one they dislike; their nerves are affected, their sweetness of nature destroyed, made irritable, unhappy and unbearable by this disagreeable association.

Some day we shall understand these subtle laws of nature, and then no child will suffer as now, through the law of attraction or repulsion.

The most impressionable period in a child's life is before birth, when the mother holds the child's future entirely in her keeping, especially in the last three months of its intra-uterine existence. When parents realize this truth they will become the architects of their children's lives, and permit no injurious influence to affect their unborn child. Then superior children will become the rule, instead of, as now, the exception.

When consulted professionally as to children's peculiarities, and those undesirable traits that appeared at an early age, by careful questioning of the mother I have elicited the condition she was in while carrying her little one, and she could generally account for the objectionable qualities, though greatly surprised that her state of mind during pregnancy should affect her child.

It is best to put only such traits in our little ones as we desire to see reproduced in them after birth. "As we sow we shall reap."

A busy physician has so little time to teach these truths, he is so occupied endeavoring to restore harmony to the diseased organism, that he seldom discusses the real cause of the trouble, but treats effects.

Prevention is so much better than cure, and some day we physicians will so regard it.

A child's food, both that received from the mother's breast and, later, at the table, has a profound effect upon its mental, moral and physical nature.

Babies and their diseases are the peculiar province of the woman physician. All her maternal nature is called forth at the sight of a sick child. She feels as if it were her very own precious little one, and she puts forth her best efforts and medical skill to save this child. She spares no pains, considers no sacrifice of personal comfort too great, nor refrains from making numerous (gratuitous, if necessary) visits in her desire to save the little one's life. She adds affection to skill, interest and tenderness to knowledge.

My dear brothers, you are welcome to carry off the honors in surgery, but when it comes to obstetrics and babies we women are at home, in the house of our nativity.

Men and women are not rivals, but complements to each other. The poet Tennyson expresses this much better than I can in his "Princess:"

"For woman is not undeveloped man,
But divine; not like to like, but like in difference."

We should work more together, each imparting a helpfulness the other needs. Our labors would bring greater fruits if we observed this method. Each lacks something the other can impart.

Comradeship in medicine would produce a much higher degree of attainment to both men and women.

Man excludes himself from blessings beyond estimate when he fails to take into partnership the women of his household.

Babies very early manifest a preference; little girl babies want to go to papa, while boys cuddle close to mother.

Oh nature, thou art a wonderful chemist and a profound teacher.

The soothing effect of an agreeable magnetism will change a cross, colicky baby, into a quiet, happy and comfortable child. Place the right hand upon the solar plexus of the little one, and the left hand on the occiput, or base of the brain, and in five minutes baby succumbs, and does not know what did it.

I have treated hundreds of cases in this way with unvaried success. Babies know who love them, and an unwelcome child suffers all through its life.

It is the greatest of crimes to bring an unloved child into the world, yet the majority of children are unexpected and undesired, hence the sorrow, trouble and disease that abounds.

Physicians have such golden opportunities to impart knowledge, to sow seed, to help their patients; they can so easily instruct—here a word, there a caution, and not tax themselves unduly. They can, while at the bedside, give valuable suggestions that will bear fruit.

Teach your patients that babies come from a warm temperature—98° F.—and need heat, air, water, food, cleanliness and tender handling. Keep your infants quiet the first three months of their lives. Do not let fond parents show off their little ones until the functions of life are

well established. It used to be thought that babies must have jaundice, but it is preventable by proper care and intelligent direction. Do not let baby be pinned up tightly; give her short dresses from birth, with knitted woolen shoes, so she can kick her feet and use her legs. The girl of the future is athletic from birth.

If this is done there will be less crying and less need of medicine.

All physicians know these simple facts, but in a busy life they do not have time to impress them; but, my dear brother physician, prevention is better than cure, and you have it in your power to accomplish so much good, not only in the present, but for future unborn generations.

Dr. Oliver W. Holmes said: "A child's training should begin three hundred years before it is born, but as the dear babies can not choose their ancestors, remote or near, will not you help the parents in your practice to more wisely choose, prepare for and provide the best conditions for their children that are to come?

The physician has both soul and body in his or her keeping, and it is a sacred stewardship, and we must account for our deeds of omission, as well as commission, in the discharge of our responsibility in the great work of producing superior progeny.

I ask your hearty co-operation in the building of a nobler race.

81 Columbia Heights.

[Written for the MEDICAL BRIEF.]

The Relations of the Science of Chemistry to Medicine.

BY HOWELL B. GWIN, M. D.,

Nashville, Tenn.

Chemistry joins hands with medicine in the preparation of materials used by the practitioner.

Chemistry is the basis of pharmacy, which, in turn, is the basis of medical art. In the manufacture of all medicines how essential that the chemist's demands for exact proportions, pure materials, and orderly compounding, be scrupulously complied with, lest on both physician and patient injury be entailed.

Our science shows its value in pointing out compatibles and non-compatibles. Two recent instances of this much-needed knowledge have been pointed out to me. A physician was in the habit of administering, in rapid succession, doses of what are commonly called calomel and muriate of iron, without dreaming that corrosive sublimate was the product poisoning the stomach. A druggist displayed in his hand a prescription of a five years' practicing physician, which had been repeatedly sent for compounding, in which two ingredients neutralized each other.

The chemist aids the medicist by displaying the impurities of drugs and medicines used by him, and the merits and demerits of "patent medicines" which are unpopular with the profession.

He also wins our gratitude in bringing "Saratoga" and "Vichy" to our doors by his reproduction of their efficacy in the draughts we take from the apothecary's convenient fountain. Space allows but the suggestion of a few of the dictates of chemistry, concerning the administration of medicine: (1) That this be according to nature, in right order and quantity; (2) that long-kept compounds be scrupulously avoided, *e. g.*, the tincture of iodine may be decomposed with the formation of ioduretted ethers, and the spirit of nitrous ether becomes strongly acid and unfit for use; (3) that other cautions be taken, such as (*a*) preventing acids from contact with the teeth, and (*b*) requiring iodine tinctures to be applied with a camel's hair brush. Even in a mechanical way, chemistry furnishes glass, steel, alloyed utensils and instruments.

Chemistry is drawing closer to medicine in throwing light upon physical diagnosis. In the study of science two rules should be kept in sight.

The first, indorsed by Newton, expressed first by Aristotle, is, in the phraseology of later days, styled the "Law of Parsimony," or "Economy." Nature binds herself to the observance of this "law of parsimony" in three distinct lines of operation, (1) where an organ can be diverted from one and set to discharge another function, nature will spare herself the expense of forming a new organ, and will adapt the old one to a new use; prodigal in the variety of her adaptations, she is niggard in the invention of new structures; (2) where, by availing herself of

the inorganic forces always at work and available in the circumambient medium, wherever that medium may be, or where, by the employment, as in what is called "histological substitution," of a lowly organized or vitalized tissue, such as elastic tissue, she can spare herself the manufacture of such expensive structures as muscle, there nature adopts a line of practice which we term a "law of parsimony." (3) Where matter that would otherwise be wholly refuse, and rejected, can be utilized, there nature exemplifies her "utilization of waste substances." The air we use in speech could not be used in breathing.

The second enunciated by Descartes is, "We must omit none of the circumstances which can by any possibility be of the essence of the case." Some of the greatest advances in practical science have been and will be made in the spirit of this recommendation, such as a chemical test of the urine for information as to the expediency of giving or withholding wine in the case of a sinking life, which would have seemed to Swift more absurd than any of the follies he ascribed to the philosophers of Laputa. Could anything have seemed at first sight more impertinent, more otiosely curious and dilettante, than to inquire during an epidemic of cholera what was the nature of the subsoil in the area it was ravaging, to what depth it was porous, and at what level the water was, and had been previously, standing in it? And yet a distinguished German has won his battle on these points by fixing, "at Gibraltar and Malta the porous subsoil and the retreating ground-water as factors in the complex constituting an area or arena for cholera."

For the advancement of medicine we must look to an increased perfection of physical diagnosis, aided by pathology. The feelings of the patient, especially if many and varied, are not reliable, and need the interpretation of physical inquiry. The eye, ear, touch, and chemistry supplying the other two senses, are the physician's agents. Clinical medicine make at least two yet unsatisfied claims upon chemistry. We want (1) analysis of the residuum of the urine, in which we hope to discover new elements, and (2) ready clinical means for recognizing what has already been discovered by more elaborate process. Our hope in this direction is unlimited, seeing there must be changes in the organs and textures, whether healthy or morbid.

Chemistry may yet discover unknown causes of contagious diseases. It is not at all improbable that the theory of contagious disease that each owes its existence to a special living organism, and not to an organic poison, may ultimately prove to be correct; and, also, that a fever spread by infection or contagion can not originate spontaneously. Yet, in either case the physician, it is hoped, will be able to draw from the quiver of the chemist arrows that shall pierce the heart of the cause.

(To be continued.)

[Written for the MEDICAL BRIEF.]

Malarial Fever.

BY H. C. BUCK, M. D.,
Friars Point, Miss.

If one is guided by the accepted theories of to-day, the question naturally arises, What is malarial fever? In a work on practice, by Dunglison, published in 1842, the writer says: "The great exciting cause of intermittents is, doubtless, some emanation of whose nature we know nothing, which, under favorable circumstances, is exhaled from certain localities and not from others. The localities in which its effects are most observed are so generally marshy that the name marsh poison or marshy miasm has been given it. It does, undoubtedly, arise, however, in districts that are by no means paludal; and hence the Italian term malaria, which merely means 'bad air,' is a preferable term, and is generally adopted." In an article on "Malaria"* the writer says: "Malaria, in the widest acceptation of its meaning, signifies air which has been rendered so impure from any cause as to produce harmful effects on the human system."

Bartholow, 1895, in speaking of malarial fever, says: "The great etiological

*Dr. Charles Smart, Reference Hand Book, Medical Sciences, 1887.

factor is malaria;" he says, further, "Marshes or moist alluvium, subject to annual overflow and exposed to the action of the sun, by reason of evaporation or subsidence of the water, is peculiarly active in the production of the poison." Again he says, "That malaria is soluble in water, and is contained in the surface water of infected districts, seems now to be well established." In Hare's Practice, 1905, we find, "By malarial fever we refer to a condition produced by the entrance into and development in the blood of a specific micro-organism, known as plasmodium malaria, the hematozoon of malarial fever, or more correctly speaking, the hamameba malaria." Dr. William Krauss, of Memphis, Tenn., in an article, "Problems and Duties in Relation to Malaria,"* quotes from Thayer, "That malaria is only fever, more or less paroxysmal, divisible into three main varieties, each caused by a blood parasite." In answer to the question, What is malaria? Dr. Krauss says, "I answer that in the beginning it is an infection of the blood by one or more groups of one or more varieties of blood parasites, whose life function in the body is the destruction of hemoglobin." That malaria is fever, and often fever with a great big F, those of us who live in intensely malarial sections will promptly admit. I have just visited a patient, a young lady, with a temperature of 105° F., but does that answer the question? According to Dunglison, malaria means "bad air." If this is correct, then malarial fever is bad-air fever, or a pathological condition caused by inhaling bad air, or we should say the air in swampy, marshy localities during the summer or hot season of the year. If we admit this we are brought face to face with the mosquito theory, whose advocates claim the anopheles mosquito is the only means by which man can be infected with the malarial poison. Dr. Krauss says, "All practitioners know that in the spring malarias are paroxysmal, and as the season advances the recovery from an attack becomes less and less complete. In the spring a patient can take his quinine 'straight' and fare well, but toward the end of the season an ill-timed dose of quinine may produce grave consequences." As to the last assertion in the above, I have seen its truthfulness fully demonstrated, and as a result of my experience I make it a rule to begin my treatment of all cases of fever by thoroughly unloading the bowels and overcoming hepatic torpor. If the mosquito theory is correct, the term malarial fever is misleading, and should be abandoned. In deference to the advocates of this theory I would suggest the disease be called "anopheles fever," as we are taught man can only get the infection through the bite of the anopheles mosquito. All authorities, up to 1895, taught that the poison found entrance into the system through the air passages by breathing the air from marshes and through the intestinal tract by drinking surface or shallow well water in infected localities. Since the date above mentioned the mosquito theory has been almost universally accepted, and now all late authorities, seemingly, accept this theory in its entirety. Is it not possible that both theories are correct? In fact, I believe this is the case. While I believe the mosquito can and does convey the poison to the human, I believe this is not the only way by which it can reach the system. In an article,* "Pathogenesis and Prophylaxis of Malaria," "Kelsh does not deny the mosquito theory of the transmission of malarial infection," but he believes, "this does not exhaust all the possibilities of infection." He says, further, "Experience has too often demonstrated that epidemics of malaria follow the extensive turning up of the soil in excessively hot seasons, ingestion of dust-laden food, over-exertion, and other faults against hygiene; the distribution of the anopheles also does not always correspond to the distribution of malarial foci, and there can be no doubt that the hematozoon finds other ways to the body than in mosquito bites." In another article,† "Malaria in Greece," we find, "In several villages in Megalopolis malarial infection follows drinking water from a certain well. According to tradition and present-

* *Journal American Medical Association*, March 16, 1907.

* *Journal American Medical Association*, November 10, 1906.

† *Journal American Medical Association*, December 8, 1906.

day experience, when the people drink this water the spleen begins to enlarge and they have fever, while the symptoms vanish when they refrain from the use of the water." In still another article, "Transmission of Malaria."* "Plehn writes from Cameroon, Africa, that mosquitoes are rare there; prizes were offered for the anopheles, with fines for houses where specimens were found, but less than two dozen were encountered during a whole year, and yet he says nowhere throughout the world is there a more redoubtable focus of malaria than is that colony." Surely two dozen mosquitoes could not infect a whole colony, even if they were "hustlers from away back," and were ever so attentive to business. I am familiar with the arguments used by the advocates of the mosquito theory, but I do not see how one not blinded by prejudice or awe for so-called authorities, can overlook the instances quoted above; nor do I see how they can reconcile these facts and the teachings of late authorities. Many great truths have their origin from very humble sources, and I believe the day near at hand when there will be a modification or reversal of opinion as regards the mosquito theory in the propagation of malaria. Our motto should be, "Prove all things, hold fast that which is good."

Liberality in Medicine.

The following letters will serve to show that a more liberal feeling is growing in regard to the practice of medicine:

J. J. Lawrence, M. D., St. Louis, Mo.:

DEAR DOCTOR.—Will you allow me to express my appreciation, not only as it may apply to your estimable journal, THE MEDICAL BRIEF, but to you personally, for the sincere evidence of impartiality and true justice to all your readers. My expression of this regard is actuated by the instructive and highly intelligent articles that were communicated by Dr. Sisca, of Australia, on Homeopathy vs. Allopathy, in which a charity beneficence and just recognition was promulgated that should weld the two schools in a manner wholly to the good of humanity. I am a homeopathic practitioner, but to Dr. Sisca I can hold out my hand of fellowship with that regard for which true medicine alone should stand.

Fraternally,

W. F. ROTH, M. D.

Manheim, Pa., May 22, 1907.

(Dr. Roth is a graduate of Hahnemann Medical College and Hospital, Philadelphia, 1894).

J. J. Lawrence, Editor MEDICAL BRIEF:

DEAR DOCTOR.—I will have to subscribe for THE MEDICAL BRIEF again. I like its independence and liberalism. Inclosed find postoffice order for one dollar. Yours with best wishes.

C. S. WHITFORD, M. D.

Clarkston, Wash., May 12, 1907.

(By the way, I am an Eclectic-Bennett, 1882).

Editor MEDICAL BRIEF:

DEAR DR. LAWRENCE.—I am pleased to note the approved and splendid form of THE MEDICAL BRIEF, and to see that it conveys a feeling of liberality and truth. I can truly say that THE MEDICAL BRIEF is decidedly in advance of some years ago, when I received it, and the force and character of the journal reveals evidence of its being a journal second to none.

WM. R. WELCH, M. D.

Denver, Colo., January 26, 1907.

(Dr. Welch is Professor of Medical and Surgical Diseases of Women in the Denver Homeopathic Medical College).

[Written for the MEDICAL BRIEF.]

Venereal Diseases.

BY J. LEIBOVITZ, B. A., M. D.,
Newark N. J.

There can be no doubt but that the best and only treatment is by early excision of the initial lesion. My experience of this has been for many years, and in nine out of every ten cases, positive results have always been obtained. Of course the excision of the chancre should only be performed under the following circumstances:

1. When seen at its commencement.

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* *Journal American Medical Association*, December 15, 1906.

2. Where the excision can be easily and carefully practiced and without any danger.

3. In cases not attended by adenopathy.

4. The patient should be free from diabetes.

Specific treatment should not be resorted to until such time as there are symptoms of the secondary stage, for then the diagnoses as to primary syphilis are not always easy. At the commencement, as to cases treated with mercury, show the later manifestations have not been more in one class than in the other. From one to two drachms of mercurial ointment should be applied for, say, fifteen days, then an interval of twelve days allowed, and this alternation carried out for some time. Protoiodide of mercury three times a day is very good, with iron and iodide of potassium in anemia.

The following prescription goes well, and medical men will do well to note it, as I have extensively used it in my practice:

℞ Hydr. Protoiodide ..... 1/8 grain.
Iodoform ..... 3/4 grain.
Ferri Sulphatis ..... 3/4 grain.
Ext. Opium ..... 1/12 grain.
Ext. Gentianæ ..... 1/12 grain.

M. Sufficient to make into one pill. D. T. D. No L. Sig.: To be taken one three times a day.

184 Spruce Street.

[Written for the MEDICAL BRIEF.]

Two Cases of Arthrogryposis.

BY ROCCO BELLANTONI, M. D.,

New York City.

This affection is commonly found among infants, and is frequently unknown because it rapidly disappears. Often the fingers of the baby's hands have been found contracted, and the physician sees nothing abnormal, and thinks he was mistaken in his ideas, yet these muscular contractions should be heeded in children, especially in infectious diseases, as diphtheria, scarlet fever, small-pox, pneumonia, etc., and in gastro-enteric disturbances they should give more thought to muscular contractions, as all diagnosticians will find this symptom in most all troubles.

There are times when the mother gives little attention to the febrile conditions of the baby, and do not call the doctor's attention to it. If the family physician paid more attention as to the possible cause, they would be justified in giving more research, and be persuaded that this disease should be classed as a special one, and have the symptoms and complications of other diseases, and should be so considered.

In the past month I have had two cases of this disease: One in a child of three years, who was suffering from a very grave diphtheria of the pharynx, with diffusion in the nasal fossa and tubes, and both internal and external ears. In such cases, where there were toxemic conditions, I saw on two occasions that the hands were contracted similar to that of the obstetrician when making obstetrical investigations, viz., all fingers extended and adjusted as a cone of the palmar muscles. This condition remained less than one day.

Other baby, eighteen months old, five days after weaning (the mother was pregnant) showed the same contractions of hands as former baby, which was his cousin. His forearms were flexed, as also his toes were in about the same condition.

He was suffering from laryngeal fever and constipation.

Nervous disturbances were very manifest in all the family, and verifies what Eichhorst has said in regard to this disease in relation to nervous neuroses.

I believe these cases worthy of mention in order to call attention of practitioners to a subject very frequently neglected.

I think that a large number of these troubles are not special diseases, but complications. Escherich says he believes an unique course produces it.

371 Broome Street.

Stolen Thoughts.

Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider. Some journals are to be tasted, others to be swallowed, and some few to be chewed and digested; i. e., some are to be read only in parts, others to be read but not curiously, and some few to be read wholly, and with diligence and attention.

Book Notices.

A CYCLOPEDIA OF PRACTICAL MEDICINE AND SURGERY. A Concise Reference Book, Alphabetically Arranged, of Medicine, Surgery, Obstetrics, Materia Medica, Therapeutics, and the Various Specialties, with Particular Reference to Diagnosis and Treatment. Compiled under the editorial supervision of George M. Gould, M. D., and Walter L. Pyle, M. D. Philadelphia: P. Blakiston's Son & Co. Price, $10.00.

As the caption of this work is suggestive of the contents, we will cite a list of names as contributors, some of which may appeal to you: Drs. Samuel W. Abbott, James M. Anders, Joseph D. Bryant, James B. Bullitt, Chas. H. Burnett, J. Abbott Cantrell, Archibald Church, L. Pierce Clark, Solomon Solis-Cohen, Nathan S. Davis, Jr., Theodore Diller, Augustus A. Eshner, J. T. Eskridge, J. McFadden Gaston, J. McFadden Gaston, Jr., Virgil P. Gibney, George M. Gould, W. A. Hardaway, John C. Hemmeter, Barton Cooke Hirst, Bayard Holmes, Orville Horwitz, Daniel E. Hughes, James Nevins Hyde, E. Fletcher Ingalls, Abraham Jacobi, William W. Johnston, Wyatt Johnston, Allen A. Jones, William W. Keen, Howard S. Kinne, Ernest Laplace, Benjamin Lee, Charles L. Leonard, James Hendrie Lloyd, J. W. McDonald, L. S. McMurtry, G. Hudson Makuen, Matthew D. Mann, Henry O. Marcy, Rudolph Matas, Joseph M. Mathews, John K. Mitchell, Harold N. Moyer, A. G. Nicholls, A. H. Ohmann-Dumesnil, William Osler, Samuel O. L. Patter, Walter L. Pyle, B. Alexander Randall, Joseph Ransohoff, Jay F. Schamberg, Nicholas Senn, Richard Slee, S. E. Solly, Edmond Souchon, Ward F. Sprenkel, Charles G. Stockton, John Madison Taylor, William S. Thayer, James Thorington, Martin B. Tinker, James Tyson, J. Hilton Waterman, H. A. West, J. William White, Reynold W. Wilcox, George Wilkins, DeForrest Willard, Alfred C. Wood, Horatio C. Wood, Albert Woldert, James K. Young. If the above list of contributors appeals to you you will know what to expect when you secure this work. It is a jewel for the active practitioner.

A MANUAL OF THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE EYE. By Edward Jackson, A. M., M. D., Professor of Ophthalmology in the University of Colorado; Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic; formerly Chairman of Section on Ophthalmology of the American Medical Association; ex-President of the American Academy of Medicine, and of the American Academy of Ophthalmology and Oto-Laryngology, and Member of the American Ophthalmological Society. Second edition, thoroughly revised. With one hundred and eighty-two illustrations and two colored plates. Philadelphia and London: W. B. Saunders Co. Price, $2.50.

As a work for the general practitioner and also for the systematic reading of the student, the newer methods of merit have been fully recognized in this edition. Such methods as: Testing the Light Sense, Mapping Central Scotoma, Taking the Prominence of the Eye-Ball and the "Fogging Method," the Account of the Mechanism of Accommodation and Pseudo-Accommodation, Special Uses of Lenses in the Ophthalmoscopic Examination, Changes in Refraction with Age, Amblyopia with Squint, the Treatment of Comitant Strabismus, Diseases and Congenital Defects of the Ocular Muscles, Putrefying Conjunctivitis, Special Conditions that Influence Keratitis and Its Treatment, Family Degeneration of the Cornea, Ureitis in Its General Relations, Theories of Sympathetic Ophthalmia, General Considerations Regarding Diseases of the Retina, Macular Atrophy of the Retina, etc. This resume of the contents of this book serves to show the reader the wide scope of its worth, which, for want of space, we have greatly curtailed. On ophthalmological scientific facts it is certainly a great work for practitioner, as well as student.

MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY. By R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics and Toxicology in Cornell University, and Tracy C. Becker, A. B., LL. B., Counselor-at-Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo. With the collaboration of August Becker, Esq., A. L. Becker, Esq., Chas. A. Boston, Esq., Hon. Goodwin Brown, Hon. W. N. Bullard, M. D., J. C. Cameron, M. D., J. Clifton Edgar, M. D., Jas. Ewing, M. D., E. D. Fisher, M. D., J. C. Johnson, M. D., D. S. Lamb, M. D., H. P. Loomis, M. D., W. B. Outten, M. D., Roswell Park, M. D., J. Parmenter, M. D., Irving C. Rosse, M. D., E. V. Stoddard, M. D., George Woolsey, M. D., and J. H. Woodward, M. D. Second edition, Volume II. New York: William Wood & Co. Price, cloth, $6.00; sheep, $7.00.

This excellent work on medical jurisprudence will be completed in four volumes, and will make a complete library on this important subject. Vol. II. contains: Table of Cases, Forensic Medicine continued; Thanatological, continued, *i. e.*, Relating to Dead Bodies; Medico-Legal Consideration of all Wounds, Medico-Legal Relations of Electricity, Medico-Legal Consideration of Death from Mechanical Suffocation, Death from Submersion, Determination of Survivorship, Bio-Thanatological, *i. e.*, Relating to Both Dead and Living; Abortion and Infanticide, When Medical Examination of the Living is Permitted or Required by Courts of Law, Pregnancy, Labor, and the Puerperal State, Sexual Incapacity, Rape, Unnatural Crimes, Railway Injuries, and a Complete Index. This is certainly a very valuable work on the subject, and all physicians can consult this work and know the exact status of any case bearing on medico-legal relations, and who needs such a work more than the physician?

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA. For students of medicine and physicians. By Joseph McFarland, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia, etc. Fifth edition, thoroughly revised. With one hundred and ninety illustrations, many of them in colors. Philadelphia and London: W. B. Saunders Co. Price, $3.50.

The author has profited by the reviews and suggestions made on former editions and incorporated such matter as seemed justifiable for its improvement, therefore the reader will find changes and some parts entirely rewritten.

THE PRACTITIONER'S LIBRARY OF GYNECOLOGY, OBSTETRICS AND PEDIATRICS, in Original Contributions, by Eminent American and English authors. THE PRACTICE OF GYNECOLOGY—Edited by J. Wesley Bovée, A. M., M. D., Professor of Clinical Gynecology in the George Washington University, Washington, D. C. Large octavo, eight hundred and thirty-six pages, with three hundred and eighty-two engravings and sixty full-page plates in colors and monochrome. THE PRACTICE OF OBSTETRICS—Edited by Reuben Peterson, A. B., M. D., Professor of Obstetrics and Diseases of Women in the University of Michigan, Department of Medicine and Surgery, Ann Arbor, Mich. Large octavo, one thousand and eighty-seven pages, with five hundred and twenty-three engravings and thirty full-page plates in colors and monochrome. THE PRACTICE OF PEDIATRICS—Edited by Walter Lester Carr, M. D., Consulting Physician to the French Hospital; Visiting Physician Infants' and Children's Hospital, New York. Large octavo, one thousand and fourteen pages, with one hundred and ninety-nine engravings and thirty-two full-page plates in colors and monochrome. Philadelphia: Lea Brothers & Co. Price, per single volume, cloth, $6.00; leather, $7.00; half morocco, $8.00. Price for any two volumes, cloth, $11.00; leather, $13.00; half morocco, $15.00. Price for the three volumes, cloth, $15.00; leather, $18.00; half morocco, $21.00.

What better addition could a practitioner make to his library than these three volumes, the subjects of which are so closely allied and yet so distinct in their bearings. What better authority can be found than these professors to edit such works? In preparing this new series the object has been to cover the whole domain composed of three cognate major specialties. Eminent American and English authors have united under the editorship of Drs. Bovee, of Washington; Carr, of New York, and Peterson, of Ann Arbor. By excluding those features of disease which are properly to be sought in works on general medicine, these volumes find space for a complete and comprehensive presentation of their respective subjects, with full, practical details. Together with the most advanced knowledge of established value, the authors have included their own observations, and the therapeutic measures which have resulted in the greatest success. This adds a personal element of obvious value. The engravings alone are rich in conception and significance. In conclusion, it is wise to say that every physician should have these three volumes in his library, but should he only desire any of them separately he can secure them at prices named above.

MODERN SURGERY. General and Operative. By J. Chalmers DaCosta, M. D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital, and Consulting Surgeon to St. Joseph's Hospital, Philadelphia. Fifth edition, thoroughly revised and enlarged. With eight hundred and seventy-two illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company. Price, cloth, $5.50; half morocco, $7.00.

If any physician or surgeon will glance at this edition they will find that the work has been thoroughly overhauled and many alterations and additions have been made. Especial note should be made on the subject of hernia, ulcer of the stomach, cancer of the stomach, ulcer of the duodenum, tetanus, snake bites, syphilis of bones and joints, gonorrhea in children, concussion of the brain, compression of the brain, hydrocephalus, cephalocele, spina bifida, suture of the divided spinal cord, injuries of electricity, fractures of the bones of the foot, surgical tuberculosis, cleft palate, Bier's method of congested hyperemia, and perforation of the bowel in typhoid fever. These subjects have been changed to conform to new methods, and much new matter, not in past editions, have been added, thus making this edition appear almost like a new work.

EYE INJURIES AND THEIR TREATMENT. By A. Maitland Ramsey, M. D., Fellow of Faculty of Physicians and Surgeons, Glasgow; Ophthalmic Surgeon, Glasgow Royal Infirmary; Professor of Ophthalmology, St. Mungo's College; Lecturer on Eye Diseases, Queen Margaret College, University of Glasgow; author of Atlas of External Diseases of the Eye, etc. Glasgow: James Maclehose & Sons, publishers. New York: The Macmillan Co. Price, $6.00.

The beauty and clinical worth of this work consists mainly in the colored plates and the excellence of the formulæ. Theoretical discussions find no place in this book, but the clinical facts that are mainly drawn from the personal experience of Dr. Ramsay will prove of inestimable worth to the reader. In case of accident the reader will find material that will serve as a safe guide. Many new features are incorporated that will make this book very valuable. General practitioners are interested in eye troubles.

PSYCHOLOGY APPLIED TO MEDICINE. Introductory Studies. By David W. Wells, M. D., Lecturer on Mental Physiology and Assistant in Ophthalmology, Boston University Medical School, etc. Philadelphia: F. A. Davis Co., publishers. Price, $1.50.

As a lecturer to medical students for many years this matter is presented as a step between psychology and medicine. The author thinks this subject should be opened up to the undergraduate at least in an elementary way, and in this work he aims to accomplish this, and, seemingly, does so in a systematic manner that seems to be convincing, as three chapters are especially devoted to hypnotism in an attempt to sum up the history, phenomena and theories. It would be well for all physicians to study this subject.

FOODS AND THEIR ADULTERATION. Origin, manufacture and Composition of Food Products: Description of Common Adulterations, Food Standards, and National Food Laws and Regulations. By Harvey W. Wiley, M. D., Ph. D. With eleven colored plates and eighty-six other illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $4.00.

Dr. Wiley, as is well known, is the Chief of the Bureau of Chemistry in the Department of Agriculture of the United States Government at Washington, and of course has inside information regarding the subject on which he writes, therefore he expresses the law regarding the subject and must be correct in his statements. If you are interested in this subject it would be well to secure a copy of this work.

THE PRINCIPLES AND PRACTICE OF DERMATOLOGY. Designed for Students and Practitioners. By William Allen Pusey, A. M., M. D., Professor of Dermatology in the University of Illinois, Dermatologist to St. Luke's and Cook County Hospitals (Chicago), Member of the American Dermatological Association. With one colored plate and three hundred and sixty-seven text illustrations. New York and London: D. Appleton & Company. Price, $6.00.

There is no specialty in medicine that calls for a more practical and concise knowledge than diseases of the skin—what will relieve or cure one class is poison for another. Therefore it requires a thorough knowledge of the anatomy, physiology, general etiology, pathology, symptomatology, and, not less, the proper treatment. If the general practitioner undertakes the treatment of diseases of the skin he should be thoroughly posted in regard to the differential conditions, so he can intelligently treat them. If they are beyond his knowledge of diagnosis it would be best to consult one who has made dermatology his special study. A thorough reading of this work will pull him through many intricate cases. General treatment has been considered in full.

THE TREATMENT OF DISEASE. A Manual of Practical Medicine. By Reynold Webb Wilcox, M. A., M. D., LL. D., Professor of Medicine at the New York Post-Graduate Medical School and Hospital; Consulting Physician to the Nassau Hospital; Visiting Physician to St. Mark's Hospital, etc., etc. Philadelphia: P. Blakiston's Son & Co. Price, $6.00.

We believe that works on practical medicine, from authoritative sources, should command attention. Dr. Wilcox, with twenty-three years' experience, and more than ten thousand graduates—many of whom will see this notice—deserves a consideration that would be envied by many of less note. We all know that the active practitioner needs all the latest views on methods of diagnosis and treatment. The progressive and up-to-date practitioner has little time to pore over volumes in search of therapeutic knowledge, when he can secure the practical items in one volume, and gain the therapeutic knowledge—physical, medical or dietetic—at a glance, because the arrangement is perfect. This work is specially adapted to the *practical* needs of the physician. It is well worth the outlay.

LATERAL CURVATURE OF THE SPINE AND ROUND SHOULDERS. By Robert W. Lovett, M. D., Boston, Associate Surgeon to the Children's Hospital, Boston, etc. With one hundred and fifty-four illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $1.75.

It has only been in later years that reliable data in relation to proper and successful treatment regarding curvatures of the spine has been successfully introduced, and it is certainly an innovation to have a work devoted especially to this subject. A great deal of progress has been made in late years in regard to what is best in such cases, especially children's, and a work of this nature becomes a necessity, if such corrections are needed to frame the human body as it was intended to be by nature. This work is worthy the consideration of any physician.

A SYSTEM OF MEDICINE. By Many Writers. Edited by Thomas Clifford Allbutt, M. A., M. D., LL. D., D. Sc., F. R. C. P., F. R. S., F. L. S., F. S. A., Regius Professor of Physic in the University of Cambridge, Fellow of Gonville and Caius College; and Humphrey Davy Rolleston, M. A., M. D., F. R. C. P., Physician to St. George's Hospital and to the Victoria Hospital for Children, sometime Fellow of St. John's College, Cambridge. Volume II., Parts 1 and 2. London and New York: Macmillan & Co., Limited. Price, per part, $5.00.

Since the first edition, in 1897, many changes have been made in methods of practice—ten years have been spent in fruitful endeavors, and these volumes have the benefit of being a new, rather than a revised, edition of this practice of medicine. The editors are certainly to be congratulated on this modern effort, as the past ten years have been productive in practical medicine. Allbutt's Practice has always been a standard, and now that it has been brought up to date, should find a ready sale among those physicians who know a good thing.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School (the Chicago Medical College), Chicago; and Frederick Peterson, M. D., President of the State Commission in Lunacy, New York; Clinical Professor of Neurology and Psychiatry, Columbia University. Fifth edition, revised and enlarged. With three hundred and forty-one illustrations. Philadelphia and London: W. B. Saunders Co. Price, cloth, $5.00; half morocco, $6.00.

In this edition the section on "Nervous Diseases" has been carefully taken into consideration and brought abreast with the present thought on the subject. So much discussion has been had, through expert evidence, on the subject of nervous and mental derangements that it would be well for all practitioners to more fully book themselves up on the subject. This book is in its fifth edition, and the fact must not be lost sight of that the authors are in positions to fully give the best matter on the subject. Do not fail to add this work to your library, as you do not know how soon you may have to refer to it.

THE COMMON BACTERIAL INFECTIONS OF THE DIGESTIVE TRACT, AND THE INTOXICATIONS ARISING FROM THEM. By C. A. Herter, M. D., Professor of Pharmacology and Therapeutics in Columbia University; Consulting Physician to the City Hospital, New York. New York and London: The Macmillan Co. Price, $1.50.

The author of this work presents his views to the Harvey Society for the diffusion of medical knowledge, and then says that his views are presented fully in this volume because they are not suited for publication in a medical journal, and yet wishes them to be investigated by practitioners. What more suitable place could he have had for discussion than the medical journal? The author lays great stress on the originality of the methods produced in his own private laboratory, therefore, this work must be exclusively the author's views and has originality—a rare thing in books nowadays—especially in medicine.

SURGICAL DIAGNOSIS. By Daniel N. Eisendrath, A. B., M. D., Adjunct Professor of Surgery in the Medical Department of the University of Illinois (College of Physicians and Surgeons); Attending Surgeon to the Michael Reese and Cook County Hospitals, Chicago. With four hundred and eighty-two original illustrations, fifteen of them in colors. Philadelphia and London: W. B. Saunders Company. Price, cloth, $6.50; half morocco, $8.00.

Diagnosis is certainly one of the most important considerations in medicine or surgery. To diagnose properly before giving medicines or using the knife is worthy of consideration. When proper consultation has been had and operation is the only means of relief, there is no reason why it should not be speedily done. This work should be carefully read, if any doubt exists as to the method of operation, or whether it had not been better to treat medicinally. A work of this nature should be read liberally and thoughtfully, especially regarding the differentiation of affections which simulate each other.

THE INTERNATIONAL MEDICAL ANNUAL. (A Year Book of Treatment and Practitioner's Index.) A Review of Therapeutic Progress in Medicine. New York: E. B. Treat & Co., publishers. Price, $3.00.

This is the twenty-fifth yearly issue of this work and shows that it is yet young and active and has grown larger by about seventy-four pages. As long as a work shows an advance in its make-up it deserves the recognition that has always been accorded it by the profession and demonstrates that its appreciation is deserved and the publishers can afford to continuously increase its value. If you are interested in cancer do not overlook, in this volume, the part which gives sixty original contributions and monographs, illustrated. Many new and valuable things are given. Do not overlook this annual.

A TEXT BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M. D., Ph. D., LL. D., Professor of Medicine and Clinical Medicine at the Medico-Chirurgical College; Physician to the Medico-Chirurgical Hospital; formerly Physician to the Philadelphia and to the Protestant Episcopal Hospitals, Philadelphia; Fellow of the College of Physicians; Member of the Academy of Natural Sciences, Philadelphia, etc. Illustrated. Seventh edition. Thoroughly revised. Philadelphia and London: W. B. Saunders Company. Price, cloth, $5.50; sheep or half morocco, $6.50.

While the original plan of this work has been retained, the author has thoroughly revised it and brought the matter up to the latest in practice and diagnosis. It certainly is a compliment to the author to know that his efforts have been so highly appreciated by the press and practitioners.

ESSENTIALS OF PRESCRIPTION WRITING. By Bernard Fantus, M. D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons of Chicago, the College of Medicine of the University of Illinois, Professor of Materia Medica and Therapeutics, Jenner Medical College. Chicago: Chicago Medical Book Co. Price, $1.00.

The preface of this work shows conclusively why it was issued, and by giving a synopsis of it we will aim to show just reason: "Shortly after the publication of the author's 'Text-Book on Prescription Writing and Pharmacy,' which includes practice in prescription writing and laboratory exercises in pharmacy, the demand arose for a book on prescription writing that would cover the essentials of prescription writing quite as fully as the book just mentioned, to be used by students who do not have the facilities for laboratory work, nor the help of a teacher in the working out of the problems in prescription writing." This is the meat without the bones. It will be a great aid.

ESSENTIALS OF CHEMISTRY AND TOXICOLOGY. For the use of Students in Medicine. By R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics and Toxicology in Cornell University. Thirteenth edition. Revised by R. J. E. Scott, M. A., B. C. L., M. D., author of "The State Board Examination Series." New York: William Wood & Co. Price, $1.00.

This work has been so popular with the American medical student that the thirteenth edition was earnestly called for. The celebrated author has used his utmost endeavors to place in the hands of the student a work that is relieved of all verbiage and included only the essential facts, especially that of the chemistry of therapeutics in preference to that of pharmacy, thus making it applicable for the foundation of rational medicine. Many changes have been made in this edition, and we find it up to the standard.

A TEXT BOOK OF MATERIA MEDICA, THERAPEUTICS AND PHARMACOLOGY. By George F. Butler, Ph. G., M. D., Associate Professor of Therapeutics in the College of Physicians and Surgeons, Chicago; Professor of Medicine and Therapeutics, Dearborn Medical College, Chicago. Fifth edition, thoroughly revised and rewritten, and adapted to the eighth revision (1905) of the U. S. Pharmacopeia. By Smith Ely Jelliffe, M. D., Ph. D., Professor of Pharmacognosy and Instructor in Materia Medica and Therapeutics in Columbia University (College of Physicians and Surgeons), New York. Philadelphia and London: W. B. Saunders Co. Price, cloth, $4.00; half morocco, $5.00.

This work should meet the demand of a new book on the above subject, as it has been entirely remodeled, rewritten, and all the type has been reset, thus making an entirely new and clean edition, although the work is not as bulky owing to its being more compact, thus a vast improvement in its style has been made at no sacrifice to its worth. In fact, it is an up-to-date work on materia medica and will appeal to all students and practitioners.

RETINOSCOPY (or shadow test). In the Determination of Refraction at One Meter Distance, with the Plane Mirror. By James Florington, A. M., M. D., author of "Refraction and How to Refract," "The Ophthalmoscope and How to Use It," Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Fifth edition, revised and enlarged. Fifty-four illustrations, ten of which are colored. Philadelphia: P. Blakiston's Son & Co. Price, $1.00.

The simplest and best methods always commend themselves to thinkers, therefore to get out of the old ruts and read along new lines of thought can but be beneficial to any one who wishes to progress in his practice. This work will give you new ideas. Why not benefit by them?

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Editorial.

Envy.

The envious man is never happy and rarely successful. He can not see clearly the relation of things because of the cloud over his faculties. He is so busy finding fault with others he can not find time to attend to his own affairs. Envy is a greater handicap to a man's efforts than a physical deformity. Envious thoughts act like a poisonous ferment, sickening and perverting the unfortunate being that harbors them. Emulation stimulates a man to stronger and better efforts, whereas envy only incites within him an animosity and rancor which, when expressed, excites in others distrust and disapproval rather than sympathy and support. The doctor, for instance, who starts out to crush a competitor by ridiculing him, by insinuating all manner of disparaging things, may set a town by the ears for a little while, but the truth is certain to be known sooner or later, and then his wrong-doing will recoil on his own head.

There are few doctors, we are glad to say, who would stoop to use such contemptible means of uplifting themselves. The great majority believe in a fair field and a straight race. Cordial relations and reciprocal good wishes are the rule.

This is the right way. The doctor, of all men, needs to study how to see the good in everything and everybody. He should strive constantly to broaden himself, to refrain from being governed by his prejudices, to keep from criticizing where there is no need for it. The more

manly the doctor is, the more he can do for others. The strong, helpful spirit brings a sustaining atmosphere into the sick-room. Rest and comfort penetrate like a healing balm straight to the citadel of life. The patient is better for the doctor's visit. How or why she hardly knows, but "virtue has gone out of him."

So do not get into the habit of grumbling and finding fault. Seek out the ever-present good, and dwell on that. Persons are seldom made better by harping on their faults. Praise of their good qualities is far more likely to strengthen them on the best side of their characters.

Envious thoughts are best corrected by laboring for self-improvement.

The Unreliability of the United States Pharmacopœia and National Formulary Imitations.

One of the leading druggists of Wilmington, Delaware, writing to one of the drug journals, says: "We all know that small quantities of U. S. P. and N. F. preparations will not be made by twenty thousand druggists without differing in taste, color or *some other way;* and, further, there will be the temptation to make too much, and therefore to keep it too long, and then dispense it over the counter. *That the physician can not be sure he is getting exactly the same preparation whenever he writes for a U. S. P. or N. F. product will be, at least, a good excuse for not prescribing them.*"

Now, the case against the movement which the pharmaceutical associations have started, and in which the A. M. A. officials, in their desire to win the druggists over to them, and get their aid in the furtherance of their legislative schemes, have joined, could not be more strongly stated. What the doctor wants above everything else in treating a patient is to feel certain that *he gets exactly the medicine that is prescribed*, but he can never have this assurance when his prescriptions are sent to first one druggist and then another, and *for the reasons so plainly set forth by the Delaware pharmacist.*

Now, a great many of the U. S. P. preparations, and nearly all of those in the National Formulary, are mere imitations of proprietaries which have been tried for years and found reliable. They can not possibly be *exact* reproductions, and are at best *mere approximations*, made up by guesswork. Then, what is the common sense thing to do when a doctor wants to prescribe for a patient? It seems to us he should prescribe the original proprietary, which he knows must be uniform, and which has behind it the reputation of the manufacturer. He can feel in this case that he is getting a remedy made up of the best of drugs, and upon which he can rely with as much certainty as is possible as regards a medicine.

A Mechanical Remedy.

In some persons, the gall-bladder does not empty itself readily, through some disturbance of the mechanism of expulsion. In these cases, intermittent pressure over the region of the gall-bladder, which is located at the edge of ribs and a little above on the right side, will start a downward movement of the bile towards the bowel.

The gall-bladder is thus evacuated, and the liver once more provided with a receptacle in which to store its secretion, thus relieving its obstructed channels of a substance foreign to them, and supplying the bowel with a necessary peristaltic persuader and a normal element of its digestive juices.

Bile which remains too long in the gall-bladder thickens, and gall-stones are liable to form. The liver substance becomes irritable and inflamed when constantly soaked in bile.

To mechanically express the bile, employ the ball of the thumb or hand, pressing downward from the edge of the ribs. Begin at the hip-bone, and extend around as far as the navel. Then make a return movement.

Kneading the liver for five or ten minutes each night and morning is a valuable mechanical remedy in torpid liver and biliousness of long duration. It paves the way for the successful action of indicated drugs. Sometimes it is sufficient in itself to relieve such symptoms as want of appetite, foul tongue, costiveness, etc.

Persistence, careful dieting, avoidance of colds, exposure in bad weather, etc., are necessary to secure the best results.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
NINTH AND OLIVE STREETS,
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FOREIGN OFFICE:
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[Written for the MEDICAL BRIEF.]

Colles' Law and Its Exceptions.

BY GEORGE OGILVIE, B. SC., M. B. (EDIN.), M. R. C. P. (LOND.),

Chevalier de la Legion d'Honneur;.
Senior Physician to the French Hospital, London;
Senior Physician to the Hospital for Epilepsy and Paralysis, London.
London, England.

No. 1.

The generally accepted doctrine, that the mother of a child that suffers from inherited syphilis can not contract syphilis from her own offspring is known as Colles' law by the whole medical world. It was first called "Colles' Law" by Diday in the year 1854, and not by Hutchinson, as erroneously stated by Dr. McDonnell, editor of Colles' works.

Having had occasion to consult the literature of this subject, I have been surprised to find that by some authors the paternity of this doctrine has been disallowed to Colles, and attributed to Baumès and that this view has been upheld in such well-known and widely read textbooks as those of Fournier and Kaposi. Fournier, with rhetorical effusion, exclaims, "Rendons à César ce qui appartient à César," and replaces the name of Colles by that of Baumès. Kaposi, however, contents himself by saying that it is more correct to call it after Baumès; and Bergh expresses himself in a similar manner.

Considering that Colles' book was published three years before that of Baumès, I was interested to find out on what grounds the continental writers tried to sever his name from this law, the formulating of which must always be regarded as a high testimony to his powers as a clinical observer.

The perusal of what has been written on this matter has convinced me that the alteration introduced by the writers above mentioned is in no way justified, some of Colles' statements having been either misconstrued or misrepresented. I believe that the following presentation of the arguments adduced by these writers, and the criticism of those arguments in the light of Colles' original text, will prove their fallacy. I wish it, however, to be understood, that in the following remarks the validity of Colles' law is not discussed, but only the history of its origin.

I will give first of all a short sketch of Colles' own remarks on this subject. They are to be found under the heading, "The appearance and nature of those diseases which are communicated by the infant to the nurse." Their object is not to discuss the question of the mother's state of health before and after the birth of a syphilitic child, but to prove the infectious nature of the secondary symptoms of the child, and at the same time to show the identity between the disease transmitted by the child to the nurse, and that acquired by the parents and trans-

mitted to the child. On these two points, both at the time when Colles wrote, and afterwards the teaching of John Hunter, was dominant. Colles' object was to disprove the correctness of Hunter's teaching, and to prove the identity of the acquired and congenital forms of syphilis. He therefore begins by giving a description of the nurse's disease, which commences at the nipple, and is followed by constitutional symptoms. He then remarks that he has never seen the nipple inoculated when the mother was the nurse of the child. He further relates a case which appeared to form an exception to this curious fact, but which, on closer inquiry, proved to be a case of syphilis acquired by the child after birth, and given to the mother. In commenting on this case he says:

(a) As yet I have not seen any instance in which an infant infected by the mother communicated a venereal ulcer of the nipple to her.

He then speaks about the treatment of nurse and child, or nurse alone, by mercury. He shows how the disease which has been traced from the parents to the child, and from the infant to the nurse, might be communicated by the nurse to her husband, and might also, through secondary symptoms, spread to the dry nurse or any other person handling the child. In proof of this he gives three cases of which the first only, at present, is of interest. A servant girl is infected by a child, both parents of which had syphilis two years before its birth. Here Colles remarks:

(b) And let it be observed that the mother had not in any way suffered from the disease of the child; she had not received any infection from her own child, yet the disease was capable of infecting the servant girl. These statements will be referred to in the following remarks as (a) and (b).

The four cases referred to are the only cases given by Colles, *i. e.*, the first to show how mistakes might occur between acquired syphilis in infancy, and congenital syphilis, the last three to show how congenital syphilis might be the source of the acquired form. Not one of these cases is intended as a corroboration of Colles' law. In fact, no attempt has been made on the part of Colles to demonstrate this law by enumerating any personal observations. Having accomplished his task of describing the disease communicated by the infant to the nurse, and of establishing its specific nature, he winds up by once more mentioning the fact of the immunity of the mother. This is referred to altogether three times. The three references are as follows:

1. The following fact appears to me deserving of notice: I have never seen or heard of a single instance in which a syphilitic infant (although its mouth be ulcerated) suckled by its own mother had produced ulcerations of her breasts; whereas very few instances have occurred where a syphilitic infant had not infected a strange hired wet nurse, and who had been previously in good health.

2. It is a curious fact that I have never witnessed, nor ever heard of an instance in which a child deriving the infection of syphilis from its parents has caused an ulceration in the breast of its mother.

3. One fact well deserving our attention is this, that a child born of a mother who is without any obvious venereal symptoms, and which without being exposed to any infection subsequent to its birth, shows this disease when a few weeks old, this child will infect the most healthy nurse, whether she suckle it or merely handle and dress it; and yet this child is never known to infect its own mother, even though she suckle it while it has venereal ulcers of the lips and tongue.

Of these three different ways of stating Colles' law, No. 1 is the most definite. It must be borne in mind that Colles was well aware that the mother of a syphilitic child need not present, either before or after the birth of the child, a single symptom of syphilis, and that in undoubted cases of congenital syphilis the most careful examination might reveal nothing except the history of previous disease in the father. Particular stress must be laid on this fact, as it has not been pointed out by any of the writers on the subject. Therefore, the rule as formulated in No. 1 is the fullest and most precise expression of the fact known as Colles' law.

Almost the same may be said of No. 2. The difficulty arising from the interpretation of the words "its parents" is not real. Certainly "its parents" might mean both parents or either of them; but that the last interpretation is undoubtedly the correct one follows from the fact that, according to Colles' the child may derive syphilis from one or both parents, and that the mother might to all appearance escape altogether. The interpretation of any text must be given in conformity with the views of the writer on the entire subject; and although I am aware of the difficulty which the words "its parents" might present to a purely philological mind, the meaning is clear to any medical man who has read the whole of Colles' book.

In the same spirit one has to read No. 3. Here the words "Who is without any venereal symptoms" are open to attack, as the possibility of past syphilitic symptoms is not excluded. It must be admitted that the meaning here is less clear than might be desired, but in the face of the former statements, one has without doubt only to deal with a certain laxity of expression.

I have before quoted, under (a) a remark of Colles', which also suffers from indefiniteness of expression, even to a greater degree than No. 3. That a child "infected by the mother" does not communicate the disease to her nipple is a truth which forms only part of Colles' law, and can not be considered as an adequate expression of its whole meaning. The phrase merely states the fact that as the mother is actually suffering from syphilitis, she can not, of course, be reinfected. In the same way, the remark (b) only says that a mother who had previously contracted syphilis, and transmitted the disease to her offspring, can not be reinfected by the latter. Neither of these remarks was made in reference to cases adduced for the purpose of proving Colles' law, and, although they illustrate part of it, they were not intended to express its full meaning. They merely show that the mother who has had at any time symptoms of syphilis does not contract a chancre of the nipple from her syphilitic child. The observation first made by Colles is, that "whilst wet nurses not infrequently contract chancre in the nipple from nursing syphilitic infants, such accidents never happen to the infant's mother." That mothers might give birth to syphilitic infants without ever exhibiting in themselves any symptoms of syphilis *was known to Colles.*

It is well to bear in mind that Colles' observations were not made to fit or support any particular theory. His work was written, to use his own words about another worker on the same subject, "by a man who had no particular theory or doctrine to support, who seems to have written for the mere purpose of stating facts, and recording an account of the propagation of this afflicting disease." It may be doubtful whether Colles fully realized the theoretical bearing of his law. Regarding those cases in which the mother remains free from symptoms, he says that they are "so strange and so difficult to explain that nothing short of actual observation could induce us to allow the fact." He does not attempt their explanation; but whatever their explanation may be, whatever conclusions may have to be drawn from them, *he was aware of their existence.* He simply stated them as facts of actual observation, just as he stated it as a fact of mere clinical experience that a syphilitic child nursed by its mother does not infect her. No better and more definite expression of this rule could be wished for than Colles' own words quoted under No. 1, by which he introduces the subject under discussion. It will be found that reference to this most precise expression of his law is either omitted by his detractors, or that it has been misconstrued in a manner neither warranted by his words, nor by his teaching in general.

In order to discuss the different interpretations which have been given to Colles' words, it seems best to record them in the same chronological order as they appeared in the controversy evoked by a paper by Behrend. He was the first to question whether Colles really meant what is now understood as the law bearing his name. His whole argument is contained in the following sentence: "Moreover, up to the most recent date all the authors who reproduce the above rule formulated by Colles have not noticed

that its framer in corroboration of it communicates the history of a case, and mentions expressly that two years before he had attended the father as well as the mother of the child for secondary syphilitic ulcerations, and that he does not speak about mothers who never showed a symptom of manifest syphilis, but only of those who had no visible venereal symptoms, and who consequently had latent syphilis."

Behrend therefore concedes to Colles only the authorship of that part of the law which says that a mother who has had syphilis is not liable to be infected by suckling her child, while he attributes to Baumès the other part which says that the mother who has apparently escaped syphilis is not infected by the child to which syphilis has been transmitted from the father through her. To have united these two parts into one law, which says that a child suffering from hereditary syphilis does not infect its mother by suckling, is, according to Behrend, due to Diday, and he therefore considers the latter as the real author of what is commonly called Colles' law.

In reference to the case alluded to by Behrend, it was not given by Colles in corroboration of his law, but to show how congenital syphilis in the child might be the source of acquired syphilis in the servant. He only mentioned, by the way, the fact that the mother was not infected, while the servant was. The second part of Behrend's sentence refers to No. 3. I have already mentioned that the words "without any obvious venereal symptoms" do not *exclude* the possibility of venereal symptoms in the past, but I fail to see how they can *prove* the existence of former symptoms. If this kind of argument is to hold good, a general treatment of the human race by mercury would be indicated. Behrend quotes neither No. 1 nor No. 2, and therefore overlooks the fact that what he ascribes to Diday has already been said in identical words by Colles.

Behrend's statements were accepted by H. and M. Zeissl, and incorporated in their well-known text-book. To this Diday and Doyon replied by quoting No. 2, and remarking that they understood the words "without any obvious venereal symptoms" as meaning that the mothers had not had at any time any symptoms, while Behrend understood them to mean that there were no symptoms at the time of observation. Although the interpretation of Behrend is correct from a strictly grammatical point of view, I have pointed out before that in the light of No. 1 and No. 2, the interpretation of Diday alone is admissible, it being true to the sense if not to the letter. Diday adds that Colles had been understood in the same sense by Ricord and Fournier.

In 1883, Behrend's answer appeared under the title, "Is the so-called Colles' law a law or not?" He quotes in full the case to which he referred in his first communication, repeating his erroneous statement that Colles had given the case to prove his law; and he also repeats, without mentioning No. 1, that the equivocal words in No. 3 point to present and not to past symptoms. His attention being drawn by Diday to No. 2, he contends that the words "its parents" *must* be understood by every one as both parents, and that was meant by Colles. As shown above, the words *might* be understood as meaning either both parents or one of them; but they must be understood in the latter sense for the two reasons already given, viz., that Colles states himself that the child may derive the disease from one or both parents, and that he was aware of the cases in which the mother apparently escapes. Behrend winds up by repeating that, in adding the "additional" thesis of Baumès to the "original" thesis of Colles, Diday formulated what is wrongly called Colles' law.

Behrend's reply was followed directly by an article from Diday and Doyon, entitled "The Letter and the Spirit of Colles' Law." The writers insist upon the fact that not one of Colles' cases is intended as a proof of his law; that the meaning of the words "its parents" in No. 2, is not to be interpreted in the sense in which Behrend understands them; and that if they are properly understood as signifying "either of them," Colles' statement quoted under No. 2 is identical with the law formulated by Diday.

Here the controversy between Behrend and Diday ends. It thus appears that

Colles' most precise expression of his law No. 1 was never adduced on either side; that No. 2, misinterpreted by Behrend, was considered identical by Diday with his own enunciation of the same law; and also that the purpose for which Colles published his cases being misunderstood by Behrend, their importance and bearing were not rightly estimated by him.

A remarkable feature of this discussion is, that it was Diday to whom Behrend gives credit for having rightly understood and best formulated what is meant by Colles' law, and to whom he consequently grants its authorship—who, finding his views unmistakably expressed by Colles, first introduced the expression "Colles' law." He twice gracefully declines the honor which has been thrust upon him, thus vindicating Colles' rights, and protecting himself against "his friends." One might have expected that Diday's definite declaration would have put an end to this controversy, settling it in Colles' favor.

This expectation was not realized, however, for a paper was published in 1889 by Morel-Lavallée, who, under the advice of Fournier, once more undertook to examine into the merits of the contradictory statements previously made. Not a single argument that had not been previously adduced by Behrend is brought forward by Morel-Lavallée to strengthen his assertions, nor has one of the old arguments been shown in a different or more convincing light. He does not dispute, as Behrend did, that the words "its parents" might be interpreted as "either parent," but this interpretation he considers to be "slightly forced."

He again lays the whole stress upon the two quotations (a) and (b), which to him contain the "striking and blinding proofs" that Colles never meant to speak of cases where the father was syphilitic and the mother healthy. Of these cases however, Colles did speak; he was well acquainted with their occurrence, and his teaching was that the hereditary syphilis of the child involves no danger to the nursing mother. Morel-Lavallée again adduces the same two cases of Colles, of which one was given to prove the infectiousness of the hereditary disease, and the other to show how it might be mimicked by the acquired form. Both these cases exemplify that part of Colles' law which is explained by the unity of the two different forms of syphilis. Therefore the remarks attached to them only refer to these individual cases, and can not be quoted as the full expression of Colles' law. Under No. 1, No. 2 and No. 3. I have given above the three different ways in which this law is presented in its entirety in Colles' book, whilst (a) and (b) only represent its more restricted truth. Morel-Lavallée founds his arguments on these casual remarks, and by unjustifiable generalization he tries to throw doubt on the most definite statements made by Colles; but while he does not strengthen Behrend's case by adducing anything useful in argument or fact, he tries to weaken Colles' case by such extraordinary tactics of interpretation that I can not allow them to pass unexamined. The words "the most healthy nurse" furnish the basis for the following remarks, viz., that what Colles considered as the surprising feature was the fact of the healthy nurse being infected, and not the fact of the mother escaping infection, and that Colles would have been less surprised to see the nurse contract a chancre of the nipple if she had been infected before; in fact, he would have expected the healthy nurse to escape, and the syphilitic mother to be reinfected. According to Morel-Lavallée, Colles was under the idea that the syphilitic infection diminishes the resistance of the constitution, and therefore increases the predisposition to reinfection; that, in fact a healthy person, and still more a "most healthy" person, was less liable to be infected than a person already affected with the disease. There is not a single word, however, in the whole of Colles' book to bear out what are given here as his views, nor does Morel-Lavallée, while he faces the "danger of further diminishing Colles' merit," even attempt to adduce a reason for his supposition.

The meaning of the words "the most healthy nurse" appears most obvious, *i. e.*, a nurse who never had any trace of specific disease, about whom, therefore, no doubt could exist that the disease was contracted from the infant, and not from

any other source. Morel-Lavallée detects the same error in No. 1, where Colles says that "very few instances have occurred where a syphilitic infant had not infected a strange hired wet nurse, and who had previously been in good health." Morel-Lavallée exclaims, "This is always the same turn of thought; if the nurse had been tainted previously, Colles, it seems, would have been less surprised to see her (re-)infected, than to see her contaminated, having previously enjoyed good health." How else, or in what plainer words, could Colles have said what he wished to say, viz., that the nurse up to the time of infection by the child was healthy, and free from syphilitic infection, and therefore the origin of the infection could be established beyond doubt?

As the champion of Colles' priority Diday appeared again with a paper called "An Inquiry into Paternity: Colles? Baumès?" He rightly refers the reader to his former articles, and the arguments adduced therein against Behrend, of which not one has been invalidated by Morel-Lavallée, and he again points out that his own formulation of Colles' law, which has been generally recognized as a correct and complete one, is identical with that of Colles.

To this Morel-Lavallée replies in a letter in which he says that he withdraws from the discussion, although still conserving his opinion, because the whole question is one of translation and interpretation of an English text, a matter on which a man ignorant of the subject of syphilis could give an opinion if he knew English sufficiently well. I agree with Morel-Lavallée that a sufficient knowledge of English is all that is necessary to understand the meaning of Colles' words, and I trust that they will be understood in the future in the same sense which led Diday to affix Colles' name to the remarkable law first pointed out by the latter.

As regards Baumès, Morel-Lavallée adopts Behrend's view that what since 1854 has been understood under the name of Colles' law consists of two parts, viz., one part pronounced by Colles, the other by Baumès, and that these two parts were first united into one law by Diday. If it were true that Baumés had introduced a fact not observed by Colles, which has to be added to Colles' observations in order to establish Colles' law, why replace Colles' name by that of Baumès, and not by that of Diday? According to Behrend, and Morel-Lavallée, Diday first enunciated in an unmistakable and precise form what was wrongly called Colles' law, though called so by Diday himself. Behrend, therefore, consistently claims for Diday the authorship of Colles' law, restricting Baumès' merit to the "additional" thesis. Morel-Lavallée, on the other hand, in contradiction to his own statements, replaces the name of Baumès for that of Colles, although either of them, according to him, originated only part of the latter's law. To this inconsistency he might have been driven by the awkward position of otherwise having to give to the law a name the bearer of which declines its authorship.

It has further been argued in favor of Baumès that while Colles did not support his law by detailed facts, Baumès did so; but, in looking at the two observations which the latter relates (two mothers, one suckling five, the other two children without being infected), we find that in not one of the infants was the mouth affected, although they showed other signs of hereditary syphilis. Therefore, these cases do not fulfil the principal condition which every case of this kind has to meet, and which has been repeatedly insisted upon by Colles. As they do not even show the possibility of a local infection, they can not demonstrate the immunity of the mothers.

I may mention an interesting fact communicated by Diday. Two years before the publication of Colles' book, Baumès visited England, bent on studying the medical schools of our country. At this time the original idea of Colles, already professed by him, must have been known, and it is not impossible that Baumès might have learned Colles' law, either from his own lips or through those influenced by his teaching. Therefore, to call the law after Baumès is most obviously a misnomer, and in direct opposition to the facts granted by those who are responsible for it.

The law, if not called after Colles might have been called after Diday; but here the difficulty arose that Diday, know-

ing his indebtedness to Colles, disclaimed any share in the framing of the latter's law. Baumès is only the figurehead under which the unsuccessful attempt on Colles' rights was made.

[Written for the MEDICAL BRIEF.]

The Diagnosis and Treatment of Mitral Disease.

BY FREDERICK W. PRICE, M. B., C. M. (EDIN.), M. R. C. P. (LOND.),

Medical Registrar to Westminster Hospital and Assistant Physician to the Mount Vernon Hospital for Consumption and Diseases of the Chest, London, England.

The subject of mitral disease is important for many reasons. First of all, in regard to diagnosis, a systolic bruit audible over the apex of the heart is frequently erroneously interpreted as indicative of organic disease of the mitral valve, when it is due merely to anemia or dilatation of the left ventricle. On the other hand, mitral stenosis is a lesion which is often missed, as patients come complaining of cough and shortness of breath, or of hemoptysis, and the heart is either not examined, or, if examined, the characteristic murmur is not discovered, from the fact that it is heard over only a small area of the precordia. Secondly, the treatment of mitral disease is a matter of great concern; for, although it is true that we can not remedy a damaged valve, it is none the less true that we may by therapeutic measures extend the life of the patient for several years.

Diagnosis.—The three main channels of inquiry in regard to diagnosis are the history, the symptomatology, and physical signs.

In regard to history, the patient has almost always suffered from a previous attack of acute endocarditis, for whereas aortic disease is due to a primary sclerosis of the valve coming on insidiously during or after middle life, and associated with arterio-sclerosis, mitral disease rarely arises in this way. Practically the only class which does not conform to this rule is that in which the disease comes on between the ages of fifty and seventy, more commonly in women, and associated with chronic Bright's disease, and atheromatous vessels. The attack of acute endocarditis may be caused by rheumatism, chorea, or scarlet fever. It should be remembered that the rheumatic attack may not be a typical one; it may be very mild, or show itself in an aberrant form. Thus, a child may suffer merely from slight and fugitive pains in the joints, with no swelling or noticeable fever, or may complain of what are called "growing pains." Rheumatic nodules are sufficient evidence, and should always be searched for in childhood, as should erythema nodosum. Indeed, there is reason to believe that endocarditis may be the first manifestation of rheumatism. From this we learn that a child, or an adult for that matter, where there is a family history predisposing to rheumatism, should have the heart systematically examined, to make sure that there is no disease.

The diagnosis of an attack of acute endocarditis is of importance, for if it is possible to make a definite diagnosis of this condition, it is certain that the patient will sooner or later develop chronic valvular disease, though it may not be for many years. A large percentatge of cases in which a mitral systolic murmur is heard during the course of an acute febrile illness recover with a disappearance of the bruit, but this is because the murmur was due either to simple cardiac dilatation or anemia, associated with the febrile attack, and not due to acute endocarditis.

What are the distinguishing features, therefore, of an acute inflammation of the endocardium? In endocarditis, before establishment of a definite murmur, there is always a prolongation of the first sound. This preliminary prolongation is strongly in favor of inflammation. The early appearance of a murmur, that is, the occurrence of a murmur at an early stage of an attack of acute rheumatism, is in favor of endocarditis; for when it is due to dilatation of the left ventricle, or to anemia, it occurs only after the illness has gone on for some time. A soft, blowing quality of the murmur in contrast with a harsh bruit is of some help. A diagnosis of acute endocarditis may be made when there is a definite and considerable accentuation of the pulmonary

second sound, provided that there is not sufficient degree of congestion of the lungs to account for it.

If the murmur is purely hemic, it is often heard over the base of the heart as well as in the mitral area. When a mitral presystolic bruit is heard, there is not the least difficulty in making a diagnosis, but, as a rule, this murmur is not heard during an attack of acute endocarditis; it is heard only when a sufficient time has elapsed to allow of contraction taking place.

It should be remembered that in by no means a small proportion of cases the most careful search fails to obtain a history of any of the known causes of heart disease. These cases come on quite insidiously. A certain proportion of them are in anemic young women, who complain of shortness of breath, hemoptysis, or of the symptoms of bronchial catarrh.

For what symptoms does a patient with mitral disease seek advice? It may be mentioned that a certain number first come under medical care for some lesion of the nervous system. Hemiplegia, or aphasia, or both, coming on suddenly, and due to arterial embolism, is the commonest lesion, but hemichorea may occur instead. Mitral stenosis is the form of valvular disease which, apart from inflammation or ulceration of the valve, most commonly gives rise to arterial embolism. It is due to the detachment of fibrinous coagula from the left auricle or left auricular appendix; less frequently from the left ventricle. On *post-mortem* examination, embolism is most frequently found in the brain and kidneys—in about equal proportion—and next commonly in the spleen.

There is another class of patients who come complaining of anemia, progressive wasting, and other disorders of nutrition suggesting pulmonary tuberculosis, especially when there is hemoptysis and local consolidation of the lung. This local consolidation is by no means uncommon, and is due to infarctions of branches of the pulmonary artery.

The commonest symptoms are associated with the pulmonary circulation, so that breathlessness is one of the first symptoms. It may be only on exertion, but later on, when there is failure of compensation, it is apt to be constant, and ultimately may amount to orthopnea. Epistaxis is by no means an uncommon symptom. The patient is also liable to congestion of the lungs after exercise, and the capillaries may rupture, with resulting slight hemoptysis. *When a patient complains of spitting of blood, the heart should be examined, as mitral disease, especially mitral stenosis, is one of its commonest causes.*

From venous stasis, there is a tendency to pulmonary affections, such as bronchitis. When in congestion and edema of the lungs there is breathlessness and cough, the expectoration is often blood-stained. There is cyanosis of the face, varying in degree to a purple color. Pain is not a frequent symptom, and when present it is usually localized, and does not radiate to the shoulder and arm. The patient may suffer from headache and insomnia, due to the anemia of the brain. When the right side of the heart fails we get the symptoms of pronounced tricuspid incompetence. The liver is enlarged, tender, and may be pulsating. Generally speaking, edema is not nearly so marked a symptom in stenosis as in mitral incompetence. Ascites is often present, and rarely sets in before the dropsy of the feet and legs. It should be remembered that in mitral stenosis hydrothorax may occur without any dropsy elsewhere, and it should always be searched for. Recurrent endocarditis is a frequent complication, and pulmonary apoplexy is common.

Passing to the differential diagnosis between mitral incompetence, due to chronic valvular disease, from what is called a functional mitral murmur, the points to be taken into consideration are these: The fact that the patient has had a previous attack of acute rheumatism or chorea, the fact that he has suffered from shortness of breath on exertion or edema about the ankles. We can not rely much upon these, for in anemia there is always dyspnea on exertion, and there is frequently slight edema. But it is possible to make a definite and certain diagnosis of mitral incompetence, which is due to organic valvular disease. There are three main physical signs, namely, the position and character of the apex-beat, the area

of propagation of the systolic murmur, and the presence or absence of accentuation of the pulmonary second sound. In mitral incompetence, due to organic valvular disease, there is hypertrophy of the left ventricle. When hypertrophy is present, the apex-beat is not only pushed a little outwards, but it is also displaced a little downwards. There may be such a slight degree of valvular disease that there is no definite displacement of the apex-beat in either direction. But in those cases where it is not displaced there is almost always some alteration of its character. It becomes rather more forcible, whereas in functional conditions naturally it is less forcible than normal.

The area of propagation of the murmur is of significance. If it is propagated towards the angle of the scapula beyond the mid-axillary line we may be practically certain that it denotes organic disease. In practice I find this a safe and guiding rule. Regarding the accentuation of the pulmonary second sound, as long as there is no condition of the lungs to give rise to it, when the accentuation is definite and considerable, we may be sure that we are dealing with organic disease of the mitral valve.

A word of warning may be uttered in regard to the importance of being on the look-out for what are called cardio-pulmonary murmurs. A cardio-pulmonary murmur is a murmur which is due to some condition of the lung, the pleura, or of the mediastinum, and not to any condition of the heart. We should always exclude them in every case in which a murmur over the precordia is heard. They are apt to throw us off our guard when there is either pulmonary tuberculosis or a thickened and adherent pleura or fibrosis of the lung of the left side, or when there is a pleurisy with effusion of the right side, because in all these conditions the apex-beat may be displaced outwards. It is rarely displaced downwards.

How are cardio-pulmonary murmurs to be diagnosed? There are two distinguishing features. First, they always disappear when a patient takes a long breath, and holds the breath in; whereas they are increased in loudness during expiration. The other point is that they disappear when the patient lies down.

Passing to the diagnosis of mitral stenosis by physical examination, the pulse is of supreme importance. It is more frequent than is normal, but is often quite regular until compensation has considerably given way. It is irregular when there is associated regurgitation present. It becomes irregular first in force, and then in rhythm, and ultimately some of the beats fail to reach the wrist, due to the fact that the left ventricle is not receiving its proper quantity of blood. But the important point is that the pulse is *small*, and its tension is comparatively high unless there is accompanying incompetence.

The apex-beat is displaced outwards to the left, and not downwards, for there is no hypertrophy of the left ventricle, unless there is mitral incompetence as well. There is a thrill felt at the apex or internal to it, usually presystolic, or it may be diastolic in time. On palpating the precordia, there is a sensation communicated to the hand resembling that produced by the purring of a cat. This sign is almost pathognomonic, though in a few cases of aortic incompetence we get a similar thrill, and this disease should always be excluded. The thrill must be distinguished from a mere vibration of the chest wall, which is occasionally caused by the action of an energetic heart on rigid ribs; but there is an easy method of doing this, for by separating the fingers, and placing them in the intercostal spaces, the osseous vibrations are not felt. The thrill may be absent at some periods, and present at others. It may be absent when at rest, and developed after exertion, or when the arms are extended.

Usually the transverse diameter of the heart is increased, especially to the right. In the large majority of cases the murmur is present. It is heard at the apex or between it and the left border of the sternum. The locality of the murmur is very limited, and the area may not be larger than one inch in diameter. This fact should be particularly noted, because here is one of the most common causes why this lesion is so often missed. The murmur is usually presystolic in rhythm; that is to say, it occurs during the ventricular diastole, but at the end of that period, and it coincides with the auricular

systole, which immediately precedes that of the ventricle. A distinctive feature is that it runs up to and unites with the first sound, becoming louder as it proceeds, and being cut short at its loudest. The murmur is rarely blowing or musical, but is almost invariably rough. It may be harsh and vibratory; this harshness and vibratory quality are characteristic.

The first sound which terminates the murmur is also altered in a characteristic way. It becomes short, sharp, and clear, like a sudden snap. In some cases this is observed when there is no bruit. If such a condition be heard in the neighborhood of the apex, and we are suspicious of mitral stenosis, we should search for other signs. The second sound is reduplicated, and resembles a "postman's knock." This may be observed in the neighborhood of the apex, or at the base of the heart. Instead of finding a presystolic murmur, we may find an early diastolic or a mid-diastolic bruit.

If there is a thrill, a murmur, a short, sharp first sound, a reduplicated second sound, and the pulse has the characters already mentioned, we have no difficulty in making a diagnosis of mitral stenosis. I have already said that the murmur is often localized. It is true that the presystolic bruit is not absolutely pathognomonic, for it is heard in some cases of aortic incompetence, but the pulse, the position and character of the apex-beat, the "purring" character of the thrill, the character of the first and second sounds, all afford help in making a positive diagnosis.

Another condition which may be mistaken for mitral stenosis is where a rumbling presystolic sound is heard in children, after an attack of pericarditis. But the sound has not the vibratory character that is found in mitral stenosis, nor does it terminate abruptly in the first sound, nor is the first sound modified in the way described.

A more difficult class of case from the diagnostic point of view is the class in which the murmur is absent at the time of medical examination, though it may have been present before. In some of these cases a thrill is present. Should it be absent, we are justified in inferring that there is mitral stenosis from the character of the pulse, of the first sound at the apex, and the accentuation of the pulmonary second sound. Mitral stenosis is also sometimes missed in cases where there is associated incompetence. The presystolic murmur, instead of ending in the first sound, ends in a systolic murmur, and is often taken for a long regurgitant bruit alone. There is, however, a distinct difference in character between the former and latter parts of this continuous murmur. We can make out the rhythm by placing the finger upon the apex-beat or carotids. A mere reduplication of the first sound at the apex is sometimes mistaken for mitral stenosis, but no careful observer would make this mistake.

In the second stage of the disease, the second sound at the apex disappears, the short, sharp, first sound becomes louder, and the murmur is more frequently early or late diastolic than presystolic. Here the presystolic murmur may be mistaken for one systolic in time, and the altered first sound for the second sound. This should cause no difficulty, for we can time the murmur in the manner already indicated. Furthermore, the systolic bruit is blowing or musical, and begins with an accent, whereas the presystolic is rough and vibratory, and ends with an accent.

In the third stage of the disease, the murmur usually disappears, so that all that is heard at the apex is the short, sharp, first sound. This stage may also be mistaken for dilatation of the left ventricle, but in dilatation, a second sound is heard, while it is absent in the third stage of mitral stenosis.

Treatment.—We must consider this part of the subject fully, because its importance is not sufficiently realized.

First, in a child, if there is the slightest suspicion of rheumatism—for example, if the child has fugitive pains in the limbs or joints, or slight fever, or rheumatic nodules—we should repeatedly and carefully examine the heart, because joint affections are usually mild in children, whereas the endocardium is frequently involved. Even if the heart is attacked the symptoms of endocarditis are often very insidious. If there is the least suspicion of endocarditis, the only safe plan

to follow is to keep the patient in bed until all doubt is over. When dealing with a definite attack of endocarditis, we should keep the child in bed or in the room for some weeks, or even two or three months after the attack is over, in order to afford the heart the best chance of undergoing compensatory hypertrophy. It may be pointed out that a febrile attack occurring during childhood or adolescence in the subject of mitral disease should be treated as though its cause were rheumatism by the administration of salicine or salicylates.

It is difficult to settle how far a patient with mitral disease should be allowed to live his ordinary life. Hard and fast rules are not applicable, because the constitutions of different patients differ enormously. But there is a great cardinal principle which is of service. It is this: *Any exertion which the patient indulges in should not produce any undue breathlessness, distress, or fatigue, especially the last named.* Sudden and violent exertion should be avoided. When exercise is taken, it should be entered upon gradually. For example, in going up a hill, the patient should commence at a slower rate than when walking on the level. Systematic exercises are good, provided care be taken, for they are a help to the venous circulation; and, by expanding the chest, they tend to aspirate the heart, and increase the outflow of blood from the auricle to the ventricle.

In this connection, Schott's or Ortel's forms of treatment are useful during the stage when compensation is maintained, but not later. A patient with valvular disease should lead a quiet and carefully regulated life. A gravelly or sandy soil, where the rainfall is below and the sunshine is above the normal, is best. A winter in Egypt is beneficial. It is better for the patient to be a teetotaler, and avoid tobacco. The diet should be liberal, plain, and wholesome. Excesses should be avoided, especially of highly nitrogenous food, because it increases the resistance in the peripheral circulation. The three meals of the day should be fairly equal. A large meal causes too great a variation in the vascular system, and the heart does not readily adjust itself. The amount of fluid should be restricted, and the meals should be as dry as the patient will take them. We can not exaggerate the importance of paying strict attention to the condition of the bowels. Fecal matter in the large intestine gives rise to flatulent distention, and this, by direct pressure, embarrasses the heart, and is one of the commonest causes of palpitation.

Besides this, the large evacuation which is necessary in these cases causes a great alteration in the blood-pressure. In mitral stenosis, any existing anemia should be vigorously treated, because the systemic circulation is not well supplied with blood, so that what it gets should be of the richest quality; and also the nutrition of the heart is of prime importance. In mitral diseases, bronchitis and other affections of the lungs should, as far as is possible, be prevented at all costs, for an attack of bronchial catarrh is often just sufficient to throw the heart off its balance. It is also of importance to guard against rheumatism, which may cause another attack of endocarditis.

The patient should wear flannel or woolen underclothing, summer and winter, and avoid damp feet. Should there be the slightest manifestation of rheumatism, it should be carefully treated.

When compensation is evidently failing, and there are such symptoms as breathlessness, hemoptysis, or pain in the precordia, rest in the recumbent posture for some weeks is absolutely essential. Rest is by far the most valuable therapeutic measure which we have at our disposal in the treatment of valvular disease. If the patient is so ill that he is unable to lie down on account of the dyspnea, the body should be supported by pillows or a bed-rest, so as to relieve the strain from the muscles. Freedom from mental work and anxiety is also important, because the brain is a very vascular organ. Stimulants, if carefully given, may be of value. It is good to begin with a small quantity of wine with food. Ultimately stimulants in larger quantities are required, and good brandy is the best form. We should commence with two or three ounces per day, gradually increasing the quantity as required, but it is never advisable to go beyond ten ounces a day, and the amount should

be gradually reduced as the patient improves.

In mitral disease, the great tendency is the production of venous stasis. Therefore, the clear indication is to deplete the circulation, and thus relieve the work of the heart by diminishing the volume of blood. There are several channels by which we can do this. Perhaps the most satisfactory is to remove the portal congestion by free purgation, and thus relieve the over-distended right heart. A troublesome watery diarrhea is no contraindication to this, because it is frequently due to a passive congestion of the intestinal mucous membrane. Sulphate of soda and phosphate of soda, in equal proportions, in two or three teaspoonful doses, dissolved in water, and given before breakfast, is very good, but personally I prefer a purgative in which some mercurial preparation forms a part, such as calomel and colocynth pill, followed by epsom salts in the morning. It would be difficult to over-estimate the value of purging in mitral disease.

It is also advisable not to give digitalis or strophanthus until after free purgation. It is then—that is, after the volume of blood in the right heart has become diminished—that the organ has the chance of being helped to drive its blood through the lungs.

Six or eight leeches applied over the liver, and followed by hot fomentations, help to reduce the volume of blood in the right heart, and this affords great relief to the pain. Should the symptoms be more urgent, venesection may be advisable. Its indications are a small, weak, and irregular pulse, many of the beats being scarcely perceptible, whereas the right heart is felt to be powerfully pulsating in the epigastrium.

Another way to reduce the volume of blood is to act on the kidneys. The salts of potash, squills, scoparium, and digitalis, especially in the forms of infusion, are useful, and it is a good plan to try a combination of several. It is best to give mercury before commencing any of these drugs, as it starts diuresis.

Turning to cardiac tonics, iron, arsenic, and strychnine are extremely useful, and may be all that are required in the early stages. Later on we have to consider whether it is advisable to give such drugs as digitalis. They are not attended with such good results in mitral stenosis as they are in regurgitation, because in stenosis there is a permanent obstruction at the valve, and on account of this many physicians do not believe in their administration at all. The rules I would recommend in this connection are:

(1) Do not give them until there are symptoms of failure of the right ventricle.

(2) Do not commence until after free purgation for a few days, and, if necessary, leeching or venesection.

(3) On no account give them for a prolonged period. They should be stopped when they cause nausea and vomiting or headache, when the pulse becomes infrequent, or when the urine diminishes in amount, and for this reason the quantity of urine passed should be measured daily.

It is scarcely necessary to say that when compensation becomes established they should be stopped.

Digitalis is certainly the best drug to give in regurgitation. It may be given in the form of tincture, the powder, or the infusion; the last is best when dropsy is present. In cases where it seems inert when given by the mouth, there may be rapid improvement following the hypodermic injection of digitaline discs. They contain one one-hundredth grain each, and two of them at the most should be given. In many cases, however, digitalis causes the heart's action to become irregular, or increases an already existing irregularity, and it is also contraindicated when there is either preceding nausea or vomiting, or when these symptoms are caused by its administration. In these cases convalleria is better, and fortunately it is a diuretic. It should be given as the fluid extract in five to ten minim doses, or as the tincture in ten to twenty-minim doses.

Strophanthus and citrate of caffeine are good substitutes. Carbonate of ammonia and ether may be added to the remedies mentioned.

Treatment of Special Symptoms.—Some of these are very distressing, and should be treated in the following way:

Sleeplessness may be due to edema of the lungs, the patient waking up with

"night starts" just as he is falling off to sleep. Such a cause should be treated. Otherwise chloral amide should be tried. Paraldehyde in one to two-drachm doses is an extremely valuable drug in many cases. I have found a drachm of tincture of henbane in a little hot brandy and water often succeed.

Where all these methods fail, opium or morphia should be given. The hypodermic method is much more efficacious than when given by the mouth.

Vomiting is a serious symptom. It may be due to the digitalis. In this case, digitalini granules may be tried. If the symptom still continues, strophanthus should be substituted, otherwise such drugs should be stopped altogether. Milk is the best food, but in some it is not tolerated. In the gastric crises accompanying the failing heart, peptonized milk or milk gruel may be swallowed in sipping fashion, the patient never being allowed to take a distinct meal or a particle of solid food (Sir Wm. Roberts).

Peptonized enemas may be necessary. Iced champagne is good. If the vomiting is only slight, a brisk purge to relieve the portal congestion, and the administration of hydrocyanic acid and bismuth may suffice. A belladonna plaster may be tried for pain in the precordia and palpitation. Any possible flatulence of the stomach and intestines should be immediately treated. If the blood-tension is high, iodide of potassium, or nitro-glycerine is called for. If the symptoms still continue, morphia may be necessary.

Cough is best treated by digitalis, and carbonate of ammonia, and dyspnea by diffusible stimulants, but if there are evidences of edema of the lungs, dry cupping is by far the best treatment. It is best done when the patient wants to get to sleep, and it can be repeated. Hydrothorax should be examined for, and when present, the chest should be tapped.

Dropsy is best treated by acting on the bowels and kidneys, as already indicated. Digitalis is much better than strophanthus. Puncture or Southey's tubes are better than scarification; both should be done only under antiseptic precautions. In early dropsy, a flannel bandage wrapped round the limbs is very useful. Ascites should be treated by tapping or by Southey's tube. When ascites and general anarsaca are both present, the one which is the more predominant should be treated first.

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Cirrhosis of the Liver.

BY GORDON MUNRO, M. A., M. D.,
Glasgow, Scotland.

There are two main causes of cirrhosis of the liver, (1) alcoholism, and (2) syphilis. These two predisposing causes are often combined. This is not surprising, for the man who indulges too freely in drink is more likely than his temperate brother to place himself under conditions in which syphilis is likely to be acquired. It is said that interstitial hepatitis may arise from any infective toxin, and from many other substances taken as food besides alcohol. It is said, too, that the abuse of pepper, mustard and spices in hot climates is sometimes responsible for this condition, and in support of this theory it has been pointed out that the addition of pepper and capsicum to the food of dogs and rabbits will, after a certain time, produce a distinct increase in hepatic connective tissue. This may be true, but it seems to me that the average patient would have to take a good deal of mustard to account for his cirrhosis. Some cases of cirrhosis are undoubtedly malarial in origin, but practically the one and only cause of the disease is chronic alcoholism, with or without superadded syphilis.

Chronic alcoholism is the accompaniment of civilization. The more intellectual the race, the more frequently is alcohol resorted to in excess. In moderate quantities, even in health, it may prove beneficial, but over-indulgence in the habit is attended with the most disastrous results, even when never carried to the extent of intoxication. Chronic alcoholism is to a great extent a trade or occupation disease. Opportunity and temptation are the main factors in its production. This is readily illustrated: the vast majority of cases are met with, at all events in this country, in publicans, butlers, waiters, and commercial travelers. It is also common in "city men," many of

whom say they would do no business if they were not prepared to indulge in a "friendly glass" with a prospective client. Authors, press-men, and reporters, who have often to work at high pressure, urge that they could not perform their arduous duties unless artificially stimulated. In a large number of cases this is unfortunately true; they have become the victims of a habit or vice which it is impossible for them to shake off. The man who leads an active life is able to take more alcohol with impunity than the individual who spends the greater part of the day writing or in some similar sedentary pursuit.

Some people resort to alcohol because they are constitutionally weak, others because they are the victims of chronic neuralgia, or some other painful affection. Heredity is not without its influence, and the offspring of neurotic parents not infrequently fall a victim to the disease. Some of the worst cases are met with in married women, especially those who are childless. Their lives are monotonous; they possibly may have few friends or acquaintances. The husband leaves for his office early in the morning, and does not return until a late train for dinner. The wife makes a heavy mid-day meal, washed down with a pint of Burgundy, or a couple of glasses of whisky and soda. There is no one likely to call, she has no inducement to go out, and spends the greater part of the afternoon in a condition of somnolence. She has no real liking for drink, but resorts to it simply to kill time. As years go on she acquires the alcohol habit, which is just as deadly and pernicious as the custom of taking morphine or chloral.

Alcohol is taken in many forms, as whisky, or brandy, wines of various kinds, beer, cider, and liqueurs. There are variations in this respect, and individuals probably from accidental circumstances exhibit curious proclivities. Doctors are not without a certain influence in these cases, and that influence may be good or it may be distinctly harmful. The old-fashioned custom of advising every female patient to support the constitution by plentiful libations of stout, port wine and Burgundy has much to answer for. Fortunately, more enlightened views on this subject now prevail, and greater caution is exercised, especially amongst the leading men in our profession.

The symptoms of chronic alcoholism, even in the early stage, are characteristic and are easily recognized. One of the chief features is uncertainty of purpose—the patient is unable to make up his mind to any particular course of action, is habitually uncertain, and is careless in keeping his business engagements. He is at his worst in the early morning, but probably once started proves himself an able and capable individual. Many people who habitually consume too much, build up large businesses, and in spite of their particular and peculiar indulgence are immensely respected. This may be said with certainty, that different individuals manage to do their best work under widely different circumstances. Total abstinence does not suit every one, and many without a certain amount of alcohol would do no work at all. The total abstainer thinks that he in his wisdom can legislate for the rest of the community, and fails to recognize the fact that what may be good for him does not of necessity suit every one.

The symptoms of the disease are so characteristic as to call for very little detailed description.

In the early stage there may be indications of congestion of the liver, such as fullness or pain in the hepatic region, with a tinge of jaundice. There is frequently gastritis, producing loss of appetite, furred tongue and vomiting, especially in the morning. An examination of the abdomen may reveal considerable enlargement of the liver, of which the patient is entirely ignorant. The next symptom is hematemesis, due to commencing obstruction in the portal circulation. The quantity vomited is often considerable, as much as one or two pints; and the vomiting is followed or accompanied by the passage of blood by the rectum. Piles are not often present at the same time.

The next result of the portal obstruction is the effusion of fluid from the distended veins into the peritoneal cavity, constituting ascites. The abdomen rapidly enlarges by the effusion of fluid, which may reach several pints, while the

abdomen at the umbilicus may measure from forty to forty-two inches. In many cases, when ascites has developed, the liver is still in a state of enlargement, and can be felt an inch or more below the ribs, whilst the surface is rough, granular or nodular, and the edge is rounded.

If the organ has already contracted, it may be impossible to feel it. The spleen is often enlarged, and may be felt or percussed on. The surface of the abdomen is covered with large veins, running between the iliac and thoracic trunks. The bases of the lungs are compressed, and the heart is displaced upwards. The urine is scanty, high-colored, with an abundant deposit of red lithates, and not unfrequently a trace of albumin. This may be due to pressure on the renal veins, and is not an indication of co existing granular kidneys. The general health of the patient suffers much, and he is usually pale, thin and anemic.

Respecting the establishment of a collateral circulation, the following anastomoses between the portal and the general systems are the most important:

1. The coronary veins of the stomach anastomose with the esophageal, phrenic and left renal veins.

2. The vasa brevia of the stomach anastomose with the left phrenic veins.

3. The gastro-epiploica of the stomach anastomose with the left renal veins.

4. The superior mesenteric veins anastomose with the left renal veins.

5. The hemorrhoidal veins anastomose with the pudic veins.

6. Veins in liver adhesions anastomose with phrenic veins and veins in the abdominal wall.

7. The veins in the falciform ligament anastomose with the phrenic veins, and veins in the abdominal wall.

This differs somewhat from the classification of Sappey, which is as follows:

1. Anastomoses between the coronary veins of the stomach and the esophageal plexus which discharges into the lower intercostal and azygos veins, and also communicates with the diaphragmatic vessels.

2. Veins passing in the coronary and suspensory ligaments of the liver, and in the adhesions formed between the liver and the diaphragm.

3. The dilation of a small vein in the round ligament affording free communication between the portal vein and the epigastric vessels.

4. Veins forming the system of Retzius, which, originating in the intestinal canal and anastomosing with the radicles of the portal vein, discharge into the inferior vena cava and its branches.

5. Communications between the superior and inferior hemorrhoidal plexuses.

Cirrhosis of the liver is undoubtedly a very terrible disease, and the majority of its victims die within two years, but on the other hand it is rare compared with the enormous number of people who are chronically alcoholic. Even at its worst it is amenable to treatment. An out-door life, preferably in a sanatorium, plenty of fresh air and a fair amount of good food will do much to ward off its evil effects. Even when there is fluid in the abdominal cavity tapping and other operative procedures will go far to arrest the progress of the disease.

Incidentally it may be mentioned that the syphilitic cases usually do well on "mixed treatment," by which I mean the administration of the iodides in substantial doses, with simultaneously the inunction of blue ointment, or calomel ointment into the surface of the abdomen. This may be undertaken with advantage as a preliminary step, and when there is anemia it may be combined with a short sea voyage. Even if the patient is a poor sailor, it is by no means contraindicated for a few days sea-sickness is more efficacious than the administration of purgatives.

It is not in every case that the operation for the establishment of a collateral circulation is indicated, and the following rules laid down by Murrell may serve as a sufficient reminder.

A point of practical importance with reference to the success of the operation is the careful selection of the cases. We reject those in which there is a suspicion of carcinoma, whether of the liver itself or of the peritoneum, or of the adjacent organs. When there is a history of syphilis, the patient should be given full doses of iodide of potassium, with inunctions of calomel ointment, but should there be no improvement in the course of three

weeks, further postponement is inadvisable. The best results are obtained in the pre-ascitic stage, when the diagnosis rests on the alcoholic history with hematemesis and enlargement of the liver and spleen. Alcoholic subjects are bad subjects for operation, and it is not wise to wait until their tissues have undergone further degenerative changes. The earlier the operation, the better the chances of a successful issue. An elevation of a temperature of three or four degrees in the evening is not to be taken as a ground for postponement, nor is the presence of a trace of albumin in the urine. Many of these patients, as shown by the published records have an apex systolic murmur, and in the majority of cases it may be safely disregarded. The risks of ventral hernia have to be taken into consideration, but they may be minimized by the application of a firm binder as soon as the patient gets up, but this is a comparatively small matter when issues of such grave importance are involved.

The operation itself is attended with little risk, and in skilled hands, and with the observance of strict antiseptic precautions, is practically devoid of danger. Under favorable circumstances, the patient should be up and about again in three weeks. If the patient desires a permanent cure, he must consent to be for all practical purposes a total abstainer. This does not mean that he may not have a glass of beer with his meals, but that he must abjure whisky and all similar strong drinks. Moreover, he must take plenty of out-door exercise, and live as much as possible in the open air. The early cirrhotic may look forward to many years of useful life, provided always that he will consent to be no longer a chronic alcoholic. He will get well—but on terms.

Advance Knowledge.

On an average, medical knowledge is printed in medical journals from two to five years in advance of its appearance in medical text-books, hence the average working library composed of text-books alone is from two to five years behind the times.—MAYNARD A. AUSTIN, M. D., Anderson, Indiana.

[Written for the MEDICAL BRIEF.]

Some Observations on the Surgery of the Middle Ear.

BY GEORGE F. COTT, M. D.,
Professor of Otology in the Medical Department of the University of Buffalo.
Buffalo, N. Y.

In operating upon the ear we are taught the anatomy more or less thoroughly, but clinically we often find that our anatomy does not seem to agree. Many cases of disease of the ear are found in adults, some in old age, and a large number in children of all ages; many of the latter, however, are often overlooked. Before considering modern operations, let us look at the anatomy of the ear at different periods. The first year of infancy we find the antrum immediately above the tympanic ring; there is no mastoid present. Consequently, when necessary, the antrum may be penetrated through a thin shell of bone with a curette, and rather gentle pressure. The antrum recedes gradually with the development of the mastoid. At about ten years it will be found, instead of a large number of cells, but an enlarged antrum, or rather a large cell, forming one cavity with the antrum; access, therefore, is quite easy.

Mastoid cells begin to develop at puberty, differing from some of the other sinuses in this respect. The frontal sinus develops from the seventh to the twentieth year. The Antrum of Highmore is rudimentary at birth, and thence gradually forms. The ethmoid cells begin at the end of the fourth year. While the antrum of the middle ear is found in early fetal life. The middle ear and ossicles have relatively the same size in infancy and old age.

Now, bearing in mind the development of the structures of the temporal bone, you will notice how simple the operation the younger the patient is, in acute middle ear disease. Operations as performed at the present time give varying results. On the whole, many more patients get well than did formerly under the expectant treatment. It is very strange, but one class of men get good results in suppuration of the middle ear, with the dry treatment, while another class

get equally good results with the moist or washing-out treatment. On the whole, however, it is reasonable to deduct the following: Washing out in chronic middle ear disease is profitable when the discharge is kept up by the milder bacteria, such as pneumococci, which is the most virulent of the milder class.

Staphylococci, streptococci, etc., will seldom, if ever, disappear by the moist treatment. It is possible in a healthy and powerfully resistant patient to have the disease confined to the drum proper, eroded ossicles, and, perhaps, the walls of the tympanum. When, however, the antrum has become involved, and drainage is difficult to obtain, the number of cures are rare, indeed. Then, again, some cases get well under all kinds of treatment, or none whatever, even though the antrum be involved. The antrum, no doubt, is involved in many cases which get well by simply treating the middle ear. All things considered, the weight of evidence is very much in favor of the dry treatment. The cocci inhabiting the suppurating ear flourish in moisture, but become inert in dryness. Many cases of suppurating middle ears run uneventful courses for ten, twenty or thirty years, because Nature is very kind to us foolish humans, and barriers are set up which prevent disastrous infection of the meninges and brain, such as sclerosis, adhesions, granulations, etc., but a certain number of victims always pay the penalty. We have advocates of radical and advocates of conservative treatment in obstreperous cases, with the balance always in favor of the radical; for this reason operations properly performed can do no harm, while the "let-alone treatment" does occasionally cause death.

Now, radical treatment does not mean any special kind of operation, but means to eradicate thoroughly the diseased bone wherever found. It may mean partial removal of the posterior wall of the meatus to reach the antrum or complete exenteration or removal of cochlea or semi-circular canals, or laying bare the dura. It all depends upon the condition of the patient, and what is found as we go along. A number of times I found it necessary to open the skull and dura to follow up a sinus, when there were absolutely no symptoms indicating intracranial trouble. Conservative radicalism is a pretty good motto. That a radical operation is a serious undertaking for the unskilled, goes without saying, and no man should undertake it without first having operated several times upon the cadaver. After all, experience is the best teacher, and every man expecting to take up otology ought to see a large number of operations and results after having carefully studied the symptoms weeks before, if possible, otherwise he, too, will pay the penalty of rashness.

Now, let us follow up the average case: The patient has been treated for several months with different kinds of drugs or cleansing agents, gauze, drainage, etc., daily without result, and it is then decided to operate. What is our choice? Symptoms point to caries extending into the antrum. If the patient is an adult, and the discharge has lasted, say several years, we expect sclerosis of the mastoid, and would not think of removing that which does no harm, the mastoid process with its contents; we, therefore, after removing the soft parts make a fair-sized opening in the posterior wall of the external canal into the antrum, using a small gouge; if hearing is good, and the drum-head has a large opening, this method will prove sufficient. We may then cleanse the ear thoroughly through this opening without disturbing the mid dle ear at all, and our patient will not only get well but will have perfect hearing preserved. When, however, the patient has suffered a good deal of pain for some months, or weeks, or only days, ossicles totally or partially gone, with but remnants of the drumhead left, we may go farther and open the antrum externally, that is, chiseling away the posterior wall of the external canal, removing also the epitympanic outer wall as well, thereby converting the whole into one large cavity, especially if the hearing is much diminished or entirely gone. Feeling now with a probe, you may readily find some small opening in the bone, often over the middle ear, or posteriorly, or anywhere else, and following that up you may find the source of pain to be pachymeningitis, or perhaps epidural abscess, and your patient is saved.

It is possible, however, that a more severe lesion exists in the brain, the symptoms of which are more or less veiled by subacute or old inflammation in the middle ear. Thus brain abscess, or even ulceration of a large area, have been found *post-mortem* without even a symptom to indicate their existence. These however, are exceptional. A safe way is to remove all dead bone in a single case presenting no other symptoms than obstinate discharge. Constant or intermittent pain, or even more or less headache, demand careful search for channels of infection, for this generally means thickened dura or pus within the skull. Occasional headache, sleepiness, lassitude, vomiting, low temperature, slow pulse, etc., point to brain abscess, while rapid change in temperature may point to a thrombus, dizziness, staggering gait, or may mean cerebellar abscess. Of course, there are a number of symptoms modifying the above, or merging one with the other, which are found from time to time, but by careful observation and exclusion, one can at least know that something serious is going on within the skull, and that in all probability it is due to ear disease.

Of course, all cases operated upon do not recover completely; that is, a certain percentage of ears continue to discharge. Still, the graver danger of intracranial infection is, no doubt, done away with, but often a second operation of minor importance cures the patient.

To the beginner in operative otology, I would advise double caution when undertaking radical work or exenteration, for facial paralysis will occur often, no matter how careful he may be. My sixty-seventh case, in which I certainly was more careful than at the first, the patient developed unilateral paralysis the second day. This, however, always recovers when it comes a day or so after the operation, but it may be observed to some degree for from three to six months or more. If noticed immediately when the patient recovers from the chloroform, the nerve may have been severed, and anastomosis with the hypoglossal holds out the only possible means of improvement. It does happen that the shell holding the nerve becomes injured with curette or chisel, and may also become eroded by disease so that the exposed nerve can easily be injured and produce paralysis, for the slightest touch seems to be sufficient to paralyze the nerve completely for several months, so exceedingly sensitive is it.

In conclusion, let me add a word of caution: In all operations on the ear to be successful, "Be sure you are right, then go ahead."

1248 Main Street.

[Written for the MEDICAL BRIEF.]

A Case of Complete Prolapsus of the Uterus in a Young Woman.

BY GEO. C. BARTON, M. D.,

Dean of the Medical Department of Hamline University; Professor of Gynecology and Clinical Gynecology in the same.
Minneapolis, Minn.

This patient, a well nourished young woman of twenty-two years of age, was brought to me for treatment for a condition which is rather unique in a young woman who has never borne children. About seven years ago she had a severe fall from a ladder, and felt that she was pretty badly hurt. There was a sensation of something giving way in or near the pelvis. The next day she suffered with a dragging-down feeling, and as though some organ was slipping down into the pelvis, and this has continued until at present she has a complete prolapse of the uterus. The patient has been married but never pregnant. When she presented herself for treatment, her bowels had not been moved for several days. The rectum was full and the uterus seemed in normal position. The perineum and vulva were normal. I ordered a cathartic, to be followed by an enema. On examination the following day I found the neck of the womb protruding from the vulva and also a fold of the posterior wall of the vagina. This confirmed the diagnosis. She had some endometritis. The first step in treatment was dilatation and curettement. On passing a sound, the cavity of the uterus was found to be three inches long instead of two and one-half, the depth of a normal uterine cavity. This increased length was found to be due to an

elongated neck of the uterus. This elongated neck was amputated with a sharp scalpel, first dividing it bilaterally into two parts, amputating first the anterior lip, then the posterior, making a small flap on either side around the mucous lining of the cervix and a larger flap on the vaginal side. The vaginal mucous membrane was stitched to the mucous membrane of the cervix, going deep enough through the uterine tissue to occlude all dead space, and putting in three stitches on each side into the cervix, to form the new os, afterwards putting in the necessary stitches on either side of the os to close up the wound.

In order to retain the uterus in place, I did a ventral suspension through a small opening in the abdomen. Three sutures of chromicized catgut were used to fasten the uterus in place. The patient was kept in bed three weeks to allow the artificial support of the uterus to become firm. The result has been perfect.

1034 Andrus Building.

[Written for the MEDICAL BRIEF.]

Typhoid Fever.

BY A. N. ANDERSON, M. D.,

Professor of Physiology and Histology in the Nebraska College of Medicine.
Lincoln, Neb.

Of all the fevers a doctor is called upon to treat, typhoid most often engages his attention, and because of the frequency of its occurrence, its severity, and the possibility of some infirmity following, the disease demands our most careful consideration.

That the disease is caused by a specific germ, which enters the body, and causes an inflammation of the intestinal glands, is generally admitted. There are many sources from which this poison or germ can originate and produce infection, but defective drainage, and contaminated water supply the two conditions which are especially favorable to the growth and distribution of the bacilli. Filth, overcrowding and bad ventilation lower the resistance of the individual exposed. It is, therefore, necessary to see that we have a good water supply and perfect drainage and surroundings in general in a good sanitary condition.

Although bad water is a prominent cause of infection, we are prone to attach too much importance to water as a direct vehicle of infection. The germ can not multiply at water temperature. We will have one germ, perhaps, to gallons of water, and as it can not increase, the few germs there are taken care of by the HCl acid of the stomach. But this is not saying that we do not have infection through water, because upon standing it becomes a culture medium just as milk becomes a culture medium at room temperature, but when kept cold it is not. This explains to a certain extent why we have so much typhoid fever in the rural districts, and when an epidemic has started it is so hard to check. In the country, ice chests are not so commonly in use, so milk and food stuffs are allowed to stand around, and at room temperature become a culture medium for the bacilli.

Tracing the cause of an outbreak of typhoid fever, we must remember that the bacilli can live in the upper layers of the soil for many months, and in some food stuffs, especially sour milk; it can also be carried from one place to another by clothing. Although much has been written on the tenacity of typhoid bacillus, outside the body, under dry and moist conditions, and the possibility of its conveyance to the individual in dust, etc., it is highly probable that practically all cases occur either by direct accidental conveyance from typhoid patient or patients to those in immediate contact, through articles brought to or into the mouth, when infected by the typhoid patient.

The incubation period when infection has taken place varies generally from eight to fourteen days, sometimes longer, during which time there is a feeling of lassitude and inaptitude for work, headache, and a slight rise of temperature. Soon other symptoms appear with aggravation of those already observed. If previous cases have appeared in the neighborhood, it makes diagnosis easier. In doubtful cases, the Widal test and the Diazo reaction must be made use of, but the diagnosis is frequently possible with-

out these aids, particularly where the symptoms are typical. When the fever has reached its height, the temperature will range from 102° to 105° F., the pulse is rapid (from 100 to 110), full in volume, but of low tension, and often dicrotic. The tongue is coated, and the abdomen slightly distended and tender. Unless the fever is high, there is no delirium, but the patient complains of headache, and there may be mental confusion and wandering at night. The bowels may be constipated, or there may be two or three loose movements daily owing to the catarrhal condition of the intestinal canal. Towards the end of the first week the spleen becomes enlarged, and rash appears in the form of rose-colored spots, seen first on the skin of the abdomen. Cough and bronchial symptoms are not uncommon at the onset. In cases of moderate severity, the symptoms become aggravated during the second week, the fever remains high, and the morning remission is slight. The pulse is rapid, and loses its dicrotic character; there is no longer headache, but there are mental torpor and dullness. The face looks heavy, the lips are dry, the tongue in severe cases becomes dry also. The abdominal symptoms, if present—diarrhea, tympanites, and tenderness—become aggravated. Death may occur during this week, with pronounced nervous symptoms, or, toward the end of this week, from hemorrhage or perforation. In mild cases the temperature declines, and by the fourteenth day may be normal. In the third week, in cases of moderate severity, the pulse ranges from 110 to 130; the temperature now shows marked morning remissions, and there is a gradual decline of the fever. The loss of flesh is now more noticeable, and the weakness is pronounced. Diarrhea and meteorism may now occur for the first time.

Unfavorable symptoms at this stage are the pulmonary complications, increasing feebleness of the heart, and pronounced delirium with muscular tremor; special dangers are perforation and hemorrhage.

With the fourth week, in a majority of cases, convalescence begins. The temperature gradually reaches normal, diarrhea stops, the tongue cleans up, and the desire for food returns. In severe cases the fourth, and even the fifth, week, and sometimes later stages may present an aggravated picture of those symptoms usually observed during the third week of the disease. The patient grows weaker, the pulse is more rapid and feeble, the tongue dry, and the abdomen distended. He lies in a condition of profound stupor, with low muttering, delirium, and subsultus tenderness, the urine and feces are passed involuntarily. Heart failure and secondary complications are the chief dangers of this period, although other symptoms may arise.

Concerning the treatment of typhoid fever, it is important, in the first place, to employ a nurse who can follow the doctor's instructions carefully as to diet, giving of medicine, and keeping the patient and surroundings in a hygienic condition. The room should be well ventilated, no furniture permitted that is not necessary. Bed-clothes, linen, utensils, should be kept clean; all discharges should be sterilized.

The diet is of great importance. We must feed the patient in order to keep up his strength, and yet not overfeed him. We must give him the right kind of food, because it is through indiscreet feeding that so many of the complications occur, especially in the latter part of the disease, when the appetite of the patient returns. Of foods, milk is the best, preferably diluted with lime water, pure water, or a little brandy. We can give of this food three pints in about twenty-four hours, but a variety is better, and other liquid diets can be substituted for the milk, such as albumin water, beef juice, clear consomme, all of which can be made palatable by the addition of fresh vegetable juices. One egg may be used beaten up in milk or water. This liquid diet should be continued until the fever has subsided, and for four or five days afterward, before solid food is permitted. This new diet is introduced in the form of zwieback, over which hot milk or cream has been poured; milk toast, soft boiled eggs, meat broths, or finely scraped raw beef., etc. All through the fever the patient should be given water freely, pleasantly cold, iced tea, barley water, or lemonade may be used to change about.

To reduce the temperature, cold sponging and bath. For sponging, the water

may be tepid, cold, or ice cold, according to the height of the fever. A thorough sponge bath should last from fifteen to twenty minutes. In those cases, where the full bath is too weakening to the patient, the sponging is a good substitute. When the full bath is used, the temperature of the water at the beginning should be about 80° F., gradually reducing it to 70° F. After this there will be a diminution of the fever by one or two degrees.

Medically, I would use antiseptics cautiously. Quinine can be given in small doses, especially in the beginning of the fever. Care of the bowels is of great importance. If there is constipation, an enema should be given, followed by a calomel purge. It is well to give an enema about every fourth day, then, if required, some light laxative may be given. The mouth should be kept clean by washing it with some good antiseptic. Absolute quiet is necessary, and food should be restricted. If there is collapse, stimulants and injection of salt solution are called for. For gas in the bowels, we should use the high rectal tube. The kidneys should be watched, and heart weakness looked for. Other complications should be dealt with according to indications. Much more could be written about typhoid fever and its treatment, but I have endeavored to give briefly only that which is of practical importance to the practitioner.

1105 O Street.

[Written for the MEDICAL BRIEF.]

Personal Observations on Stricture and Its Treatment.

BY A. C. STOKES, B. SC., M. D.,

Professor Genito-Urinary and Rectal Surgery in University of Nebraska; Chief Surgeon to Swedish Hospital.
Omaha, Neb.

Stricture of the urethra, clinically speaking, has all the pathological phenomena of an ulcer in any part of the body. An infected ulcer in some part of the urethra attempting to heal brings about, a leucocytic infiltration and consequently walling off of the infection, the extension of arterioles formation of granulation tissue, connective tissue, and contraction of same, producing the symptomatology of obstruction to urination. Stricture has this additional pathological feature, that it is always on a mucous membrane, which normally is dilatable to a certain extent, and which is used several times daily for the passage of urine. The ulcer is thus exposed not only to the ordinary infections of an ulcer in other parts of the body, but in addition the irritation of a chemical fluid like the urine. It is rather difficult to say just what effect the urine has upon the ulcer within the urethra, but that it has a bad effect there can be no doubt. We are quite well aware that inflammatory processes along the urinary tract are much more easily controlled the nearer neutral or bland the urine. Chemically considered, this blandness must mean that the urine is neither sharply alkaline nor sharply acid to the ulcerating surface. In other words, the bland urine produces slight effect on the inflammatory process in the urethra.

Experience has taught me that infective processes in the urethra, whether of specific origin or not, are augmented, first, by the presence of urine, and second, by the fact that the posterior urethra has no point of drainage, unless it drains upwards; consequently, infective processes will seek all possible points of entrance to glands, vesicles, and tubes of all kinds lining the posterior urethra. We should, therefore, expect that every posterior gonorrhea would produce to a greater or less extent ulcerating surfaces which are more or less chronic, the chronicity being removed only by the removal of the two chief causes, viz., the passage of the urine over the ulcer, and poor drainage.

Thus, the chief problems to be aimed at in the treatment of an ulcer, or the result of the ulcer, viz., stricture of the urethra, will be to remove the causes as nearly as may be. In other words, the removal of the urine from the urethra, and increased drainage, and this can be done only by an opening in the posterior urethra.

We have been taught by Thompson to divide strictures into two divisions: Those of large caliber and those of small—a stricture of large caliber being defined as one which will admit a sound as large as 15 French. Those of small caliber, which will not admit a sound as

large as 15 F. Of course, we must consider this classification as more or less arbitrary.

Treatment.—Uncomplicated strictures of large size are readily treated by means of sounds. As a general rule, the stricture yields readily to the passage of instruments. If not, it is always well to remember that gentleness and patience are better than force and speed. These strictures having been dilated a few times apparently lose their terror, and the symptoms disappear to quite a large extent. I should recommend dilating strictures of large size with the sound, passing it, perhaps, three or four times weekly, depending upon the reaction produced in the urethra. I am very partial to the so-called instillating sound. In this particular class of stricture the urethra is dilated by the sound and medicated as the sound is withdrawn. If this stricture is uncomplicated and there is no infection in the prostate, seminal vesicles or bladder, one can oftentimes very readily obtain an apparent cure. In most cases, however, if the urethra is studied carefully with the urethroscope and the prostate and bladder studied by palpation and cystoscope, we are likely to find complications. In this case it is necessary to treat the complications as well. And, in my opinion, the treatment of a stricture is really more a treatment of complications than of the stricture *per se*. I am almost inclined to think that C. Fenger, who is very fond of using the phrase "once a stricture always a stricture," is right. However, by dilatation as above indicated, through periods of time varying according to the character of the stricture, we obtain a symptomatic cure in a large percentage of cases, and I am convinced that such dilatation is the treatment par excellence for strictures of large size.

We must not forget, however, that the complications may require other methods of treatment during that time. For instance, if the seat of gonorrheal infection is prostatic, we may have, in many cases, to do an external urethrotomy and cauterize according to the method outlined. If it is in the seminal vesicles, we may resort to Fuller's method of handling. One that seems to be more practical is Belfield's. I have been much impressed with Belfield's idea of opening the vas deferens and draining the seminal vesicles by the passing of fluids from the vas deferens into the urethra.

After all has been said regarding the different forms of drugs used in the urethra, the different forms of silver, the different solutions of copper, I always return to the use of silver nitrate in all forms of chronic discharge due to gonorrhea, due to stricture, and have secured better results from its use than any other form of medication. I use it in degrees of strength varying from one-quarter per cent to eight per cent, depending upon the inflammatory reaction which it produces in the urethra. I do not agree with Fenger and some of the other writers on this subject, who endeavor to make a differentiation of treatment by the question of whether there are gonococci present or not. The latter subject appears to revolve around the fact as to what the reaction of the urethra will be to various forms of medication. Astringents in chronic discharge, with the presence of stricture, have never appealed to me, and I have not obtained good results from them. In short, I may say that the treatment we use daily in our office in strictures of urethra of large size is slow dilatation by the use of instillating sounds and silver nitrate, feeling our way as to the strength of the nitrate by the inflammatory reactions produced in the urethra. If we can use eight per cent we use it, acting on the theory advocated by Keyes and others, that in all probability gonorrhea is cured, not so much by the drug action of the silver itself upon the gonococci, but by the inflammatory reaction in the urethra.

Strictures of Small Caliber.—These may be divided into:

1. Impassable strictures.
2. Strictures admitting only a filiform bougie, complicated by retention.
3. Resilient strictures.
4. Irritable strictures.

Impassable Strictures.—A stricture which is impassable to one man may not be to another. We must not forget that if there is one operation in surgery where skill is at a premium it is in passing a

stricture of the urethra. Just when a filiform bougie should be pushed forward, and when withdrawn, or when the entire filiform bougie should be introduced and when it should not, are questions that must always remain questions of judgment with the operator. I have seen cases where, during the first hour, it seemed impossible to enter the bladder, when suddenly the right move of the filiform changed an impassable to a passable stricture, and we were able to enter the bladder. There is probably no such thing as an impassable stricture; in all cases there must be an opening, but it may be so tortuous that only the most delicate handling of the bougie will enable it to pass. In these cases retention of urine almost always recurs and, sooner or later, the question arises, by what means shall we enter the bladder?

To find the urethra through perineal incision is, oftentimes, hazardous, if not impossible. We have left, then, the following methods by means of which we can withdraw the urine from the bladder, viz., suprapubic cystotomy, aspiration of the urine through the suprapubic region, and the possibilities of perineal drainage. The order in which these measures should be employed is frequently the most perplexing question. It would be an interesting thing to discuss in detail all of these various methods, but since this paper is to be one of personal experience, we will limit it to such. We have found very few cases, indeed, where the stricture could not be handled by the passage of filiform bougies and tunnel sounds. It has been our practice, where there is retention, to aspirate the urine through the suprapubic region. By the use of hot baths, rest in bed, slight doses of morphine, we have, in most cases, been able, in the course of six or eight hours, to enter the urethra. When this can not be done it is always best to make a suprapubic incision, I believe, draining the bladder through the perineum, and closing the suprapubic wound without drainage. By drainage the stricture becomes passable, and we may proceed either by internal urethrotomy and rapid dilatation or slow dilatation, beginning with small sounds. My preference is for internal urethrotomy with rapid dilatation, and I believe when this is done, and followed by the passage of sounds the results are better than by any other means.

2. *Strictures* admitting only a filiform bougie, complicated by retention, are, oftentimes, well handled by slow dilatation. I am not in favor of internal urethrotomy in strictures of small caliber, unless an external urethrotomy is done at the same time. The urine is continually passing over a wounded area, the resolution is only increased, and the internal urethrotomy offers new tissue for infection, which infection extends, so that the stricture, in time, returns with a much larger area of scar tissue, and a stricture that is worse. Therefore, in all strictures in which the bladder can be entered, if an acute infection does not demand external urethrotomy after drainage, we will lay down the principle that dilatation by sounds, or so-called slow dilatation, is the treatment par excellence.

3. *Resilient Strictures.*—These strictures are deceptive. At times they are very small and require the filiform to enter the bladder, and at other times quite large instruments may be passed. They are usually old strictures in which some excess, as sexual excitement, produces an increased flow of blood to the part. The stricture contracts, but dilates again rather more slowly than it contracts, so that in a short time the urine will pass without much trouble. In most cases these strictures require about the same treatment as those of larger caliber outlined above. One can not say that the results are particularly good, for although it may be possible, by the constant passing of sounds to the urethra, that portions of the cicatricial tissue may become absorbed, yet in our experience such things do not happen. Scar tissue of the urethra is the same as scar tissue in any other part of the body.

4. *Irritable Strictures* are those in which almost any form of treatment produces more or less irritability and pain. We are not quite clear as to their real pathology. Some have claimed the condition to be due to the presence of microorganisms; others, that it is a prostatic complication. One is hardly able to state, in so many words, just what the treat-

ment shall be, but it must not be strong medication. One of several things may result if active principles are employed. If active micro-organisms are present, one may expect an epididymitis or a vesiculitis, following strong medication. The use of the mildest forms of instillation is frequently all that may be employed in these cases. The acute inflammatory reactions in the urethra appear at times with such virulence as to almost equal an acute urethritis. I have had considerable success with salts of copper sulphate, about one per cent. This, we know, is quite contrary to the teachings of the men who claim that copper should never be used, except in old or very chronic inflammatory processes. However, the action of copper in the urethra is not as acute as that of silver nitrate, but the inflammation lasts longer. One can, oftentimes, reduce the irritability of the urethra by the use of copper, using it, perhaps, once or twice a week for the first two or three weeks, after which time one may return to silver nitrate or some other very active medicine.

I do not claim to have covered the whole ground in any way, but these few remarks are my own feeling rather than text-book ideas on the subject. To attempt to cover the question of diagnosis, pathology, classification or constitution of stricture would require too lengthy a discussion of the subject.

400 Bee Building.

[Written for the MEDICAL BRIEF.]

Practical Results in the Use of Cow's Milk for Children.

BY H. B. MILLER, M. D., PH. G.,

Professor of Materia Medica and Therapeutics, and Electro-Therapeutics in the Nebraska Medical College.
Lincoln, Neb.

Six years ago, after a thorough trial of the milk of Jersey cows, with unsatisfactory results, we began to experiment with the milk of other breeds of cattle, and today the most satisfactory results are obtained through the use of milk from Holstein stock.

Without going into the minutiæ, or the quantities of solids in general tests which have been extensively made by other investigators, we shall simply enumerate the results secured in different cases.

Case 1.—Two children, of healthy parents, that had failed to mature up to the ordinary standard at ten years of age, were put on a diet of Jersey milk. At the expiration of one year, there had been an increase of less than five pounds in weight. The surroundings of these children were of the best, and their other food was of the best quality and widest variety obtainable. At that time milk from a Durham cow was substituted for the Jersey. At the expiration of three months, the gain had been less than two pounds. The children were then placed on a diet (with the same general food) of milk from Holstein cows. At the end of one year, the average gain had been twenty-two pounds. Since that time they have been continuously on Holstein milk as a drink and general food. Their present weight is a little above the average.

Case 2.—A child, fourteen months old, was brought to me on account of its lack of growth. Finding the little one greatly emaciated, analysis was made of the mother's milk, and of the cow's milk which was being given at the same time. Mother's milk tested 3.5 per cent, and the cow's milk 6.4 per cent butter fat. Nursing was discontinued on account of the general health of the mother, and the fat of the Jersey milk reduced to four per cent. At the expiration of three weeks there was absolutely no gain in weight, and almost entire loss of appetite of the child. We substituted milk from a Holstein cow, yielding four per cent butter fat, and at the first feeding, nourishment was retained. By the end of the second month the child had doubled in weight, and since that time the little one has been continuously fed on Holstein milk and has gained normally in weight.

Case 3.—A child, four months of age, of German parentage (good health in both families), weighed eight pounds, which was one pound less than at birth. Mother's milk tested 1.8 per cent butter fat. Jersey cow's milk, yielding five per cent butter fat, had also been used for two months. We reduced the quantity of butter fat in the Jersey milk, and continued the nursing. At the expiration of

three weeks there had been no gain in weight, the child vomiting the greater portion of the nourishment taken. We substituted Holstein milk, carrying 3.2 per cent butter fat. The child is now eleven months of age, weighs twenty-six pounds, and is living on an exclusive diet of three pints of Holstein milk (without any modification) daily.

Case 4.—This child was five pounds below normal weight at the age of eight months, and would vomit almost half of the nourishment taken. It was fed on whole Jersey milk carrying five per cent butter fat. We substituted four per cent Holstein milk without any modification. At the end of six months the child is five pounds above the normal weight. Has not vomited any of its food during that period.

Case 5.—Twins, raised on Holstein milk, which had been skimmed after standing six hours. They have been exclusively bottle fed up to the age of eighteen months, receiving no nourishment except milk. Since that time they have been allowed a certain amount of other foods, and at the present time, at the age of thirty-five months, they weigh thirty-eight and forty pounds respectively.

Case 6.—Child was put on Holstein milk which was skimmed after standing twelve hours. At six weeks of age, the child weighed eleven pounds, a gain of four pounds from birth. During the next six months the amount of butter fat contained in the milk was gradually increased until the child was taking milk testing at six per cent. There was very little vomiting, and at eight months of age, the child weighed eighteen pounds. The butter fat was gradually reduced, and child returned to normal Holstein milk carrying 3.2 per cent butter fat. The gain in weight has been normal, and the child perfectly healthy.

Case 7.—Two children had been fed on milk which came from a dairy of poor sanitary arrangement, and we were unable to obtain a specimen of the milk to determine the quantity of butter fat. The children were suffering from great intestinal trouble, both vomiting and diarrhea being so frequent that the physician was unable to control it. In consultation, we advised the substitution of Holstein milk, carrying 3.2 per cent butter fat. Since that time the children have taken a quart of milk a day. There has been no medication of any kind, and the children have been perfectly healthy.

Case 8.—This child was the offspring of scrofulous parents. The grandmothers of the family had been feeding it Jersey milk, carrying 5.5 per cent butter fat, with the addition of brandy "for its colic," as they expressed it. Child was emaciated, and at the end of four weeks weighed two pounds less than at birth. Numerous prepared foods were tried, also modified milk, without any result. When the child was six weeks old, it was put on Holstein milk, 4.4 per cent butter fat. At the end of three months, child is normal in weight, and has not rejected any of its feedings.

It would be easy to enumerate an extended list of cases of children, and adults as well, that have been kept in good health, when the Holstein milk has been substituted. The best practical results we consider have been obtained from the use of Holstein milk, where the first, or largest sized, fat globules have been removed. The finer emulsification of Holstein milk, as compared with Jersey milk has been the theory started with in the use of Holstein milk as a food for infants. These results are absolutely practical, and we have the living objects to show for them. At some future date we will advance a positive explanation of the physiological reasons why Holstein milk is better than the milk from any other cow.

140 South Thirteenth Street.

[Written for the MEDICAL BRIEF.]

Two Good Remedies.

BY PROFESSOR FINLEY ELLINGWOOD, M. D.,
Editor "Ellingwood's Therapeutist."
Chicago, Ill.

Piscidia Erythrina.—This remedy was brought before the profession about fifteen years ago, as one that would probably control pain. It has not met all of the expectations of the introduction, but there is no doubt that its full value as an anodyne remedy is not yet known. It deserves a thorough, advanced study.

In its physiological action, it stimulates the salivary and cutaneous secretions, slows the pulse, and increases arterial tension. Its service by this influence, is followed by a reduction of the tension due to a slightly weakening influence of the remedy upon the heart. It at first dilates the pupils, but when the patient passes into a state of asphyxia, it causes contraction.

There is a question concerning its influence upon the irritability of the motor nerves, or upon the sensory nerve ends, but it certainly exercises a distinctly nerve sedative effect, and overcomes nervous excitability and reflex irritability. It is an anti-spasmodic of considerable power in mild cases. It does not cause dryness of the throat or mouth like opium, by suppressing secretion, neither does it induce constipation. It causes no distress in the stomach, nor does it decrease the appetite, nor the digestion.

In susceptible patients, it exercises an active controlling influence over pain, and is of much benefit in relieving general distress. There are some localities in which its pain-relieving influence is apparently much more readily exercised than in others.

As it does not oppose other indicated remedies, it may be given for the relief of pain or distress in conjunction with remedies that are specifically prescribed. It has been given with good results in inflammatory rheumatism, controlling much of the pain, and allaying gratefully the general irritability thereby induced. In the course of many inflammatory fevers, it has been given with good results.

I have obtained excellent results in the treatment of pelvic pain, whether the cause was in the reproductive organs or whether it was from renal or urinary disease. This has been especially true in dysmenorrhea, where there was ovarian congestion, as well as uterine displacements. In these cases, I have combined the agent with other specifically indicated uterine remedies, and have obtained superior results.

In the treatment of lung and bronchial troubles, those who have used it, have declared with considerable positiveness in its favor. It has been used in many forms of spasmodic cough, and especially that form of persistent cough which is due to irritation of the bronchial tubes, resulting in a constant inclination to hack, with more or less soreness of the bronchial tubes. In this form of cough it could be used in conjunction with bryonia, or if thought best, with small doses of ammonium chlorid. Five-drop doses, every two hours, have been administered with excellent results in both whooping cough and bronchial asthma.

One writer claims the remedy was most serviceable in the adjustment of fractured bones, or where the reduction of dislocations were possible without anesthesia.

Sulphurous Acid.—The field in which the most direct results from the action of this remedy are obtained, is that in which there are exudates, the development of which, induces toxines. I believe it to be as nearly specific for the removal of the exudates of diphtheria, as any remedy we have at our command. It has been proven also to be destructive to the exudates present in aphthous ulcerations of the mouth and throat, or of the nasal passages.

In the treatment of diphtheria, I have given from five to ten drops of the diluted acid, combined with two grains of sulphur, in a teaspoonful of simple syrup, or of mucilage of acacia, administering the dose every hour or two, according to the extension of the exudates.

It exercises both a local and a general influence upon this disorder, and even the most sanguine prescriber is apt to be surprised at the promptness with which the exudates will disappear under the action of this agent.

It is certainly destructive to the tubercular bacilli, but its application in a manner that will reach these germs is exceedingly difficult. The agent is especially indicated when, from any cause, the mucous membranes are dark colored or dry and dusky, whether the temperature be high or not, more especially if the tongue is coated a brown coat, is dry and pointed, has red edges or a red tip.

If the tongue is of a smooth red color or has a violet tinge, the internal use of this remedy will produce immediately satisfactory results. In the removal of exudates, these conditions need not be

considered, as the result depends largely upon the local influence of the medicine.

When from protracted disease there is gastric or intestinal fermentation, with an inclination to vomit yeast-like matter, or where there is an inclination to the development of gas, or where the fecal discharges are fetid, this remedy will serve an excellent purpose.

If the conditions of the tongue above specified are present, its action will be much more prominent.

I have been using this remedy externally recently for parasitic skin disease, and find that it destroys many forms of parasites. It is also available when applied to sore nipples, diluted either with water or glycerin, or to bruised or chapped hands, or chilblains.

100 State Street.

[Written for the MEDICAL BRIEF.]

Mosquito in Disease.

BY R. S. MAGEE, M. D.,

Professor of Pathology in the Kansas Medical College.
Topeka, Kan.

The mosquito is a nocturnal as well as diurnal insect. It is also aquatic; can not live without water, nor can it propagate its species without water. It uses as breeding places still water. If you will examine the premises where there are any old broken bottles which will hold water, you will find that these make excellent breeding places for the mosquito. Mosquitoes have also gone into houses and used vases on tables where water has been allowed to stand until stagnant. Colonies have been found in such receptacles. Holes in trees where water will stand for awhile, old bottles, cisterns that are exposed and rain barrels are all favorite breeding places. The rain barrel is probably the most prolific source of the mosquito pest. The pitcher plant which grows in swamps is well adapted for a breeding place. One mosquito depositing her eggs in a rain barrel, will, in a few weeks, be the mother of several thousand mosquitoes. The laity call them wrigglers, but if your curiosity is sufficiently aroused to take a tumbler two-thirds full of water containing these wrigglers, and tie over it a piece of mosquito netting, and stand it on a window sill, where the sunlight will warm it up gently, and you will, in a few days, be rewarded by discovering on the mosquito netting half a dozen or more of full-sized mosquitoes. If you will take a larger jar and tie over it a mosquito netting, and on the top of which put some sliced bananas, you can feed the mosquitoes, and watch their growth and progress. They are exceedingly fond of bananas.

The eggs can be readily seen on top of the water, and have the appearance of black soot at first sight, but on closer inspection they will present a curved shape. If this sooty substance is pushed under the water, it will come back to the surface again as soon as released. Closer inspection shows this sooty mass to be composed of small segments, resembling pyramids, conical in shape. If you will take a pinch of this substance, put in water (filtered so as to exclude everything else), you will find in a few days that the water will be full of wrigglers. A mosquito will live all summer unless he meets with an accident. One mosquito, even though she lives a month only, may bring forth thousands of new mosquitoes.

The male mosquito is a lazy fellow who plays the part of a drone, and does not bite. The female mosquito can easily be recognized from the male from the fact that she does not have bushy antenna, or whiskers. They have a fondness for dark colors. I have made the experiment of putting inside of the incubator some dozen small boxes covered with as many different colored cloths, running from black to white, with the varying shades between of red, green, blue, etc., and observed that it was the exception for a mosquito to sit upon the light colors, while the black cloths were covered with them.

They do not travel far from their home or place of incubation, unless they are carried by the wind. The wind will blow them up from a swamp or pond near by, so that instead of blaming the pond for the mosquitoes, the breeding place is much more likely to be nearer the house. There may be an old rain barrel, or

bucket, or can of stagnant water, which is used as a breeding place.

The three varieties of mosquito are the culex, anopheles and the stegomyia fasciata. The culex is the common variety in this vicinity; it bites, but does not carry any disease. The anopheles is the malaria carrier, and the stegomyia is the yellow fever mosquito. The malarial mosquito can be easily distinguished from the culex in three ways: first, by its peculiar markings on its body. Second, by its resting position when sitting. Third, by the way in which it bites. The stegomyia is the most handsome mosquito of all, having beautiful silver band-like markings over its body. The carrying of disease by the mosquito was probably learned from the fact that the transmission of malaria to man was accomplished by the mosquito, and this led to the discovery of the malarial organism, and the yellow fever protozone. The yellow fever organism requires ten to twelve days after the sucking of the blood by the mosquito or the protozone to go through its period of incubation; a bite between this time will not transmit the disease. The malarial mosquito requires seven to eight days.

It is not now believed that there is a man-to-man inoculation in yellow fever, but that it is absolutely essential there should be an intermediate host. Patients have been permitted to sleep in the beds of yellow fever patients, to wear their clothes, to come in contact with their vomit, and not contract the disease, while ninety per cent of those that are bitten by this mosquito come down with the disease. The same thing is true of malaria; beyond a doubt the mosquito is the only source of infection in this disease.

The extermination of mosquitoes can be accomplished in three ways: First, by surface drainage, that is, the drainage of ponds and other bodies of stagnant water. Second, covering the ponds with petroleum; this method brings about extermination by destroying the larvæ. And, third, by stocking the ponds with fish.

634 Kansas Avenue.

[Written for the MEDICAL BRIEF.]

Memorial on Medical Language Presented for Consideration to the Rectores Magnifici of All German Universities Convening in Marburg, July 30, 1907.

BY DR. ACHILLES ROSE,

Adjunct Professor of Medicine at the New York Post-Graduate Medical School.
New York City.

RECTORIBUS MAGNIFICIS.

On May 4, 1907, the two hundredth anniversary of the birth of Linné was celebrated by the entire civilized world. The most prominent among the great merits of this reformer of science is that he has created a scientific nomenclature of botany, and thereby a scientific basis for botany itself. He solved the most difficult task to which any naturalist ever put himself: the arrangement of a very extensive material from a state of chaotic confusion.

On April 18, 1787, Lavoisier presented a memorial on the necessity of reform of chemical nomenclature to the Royal Academy of Sciences, in Paris, explaining the necessity of such reform in the following words:

"Onomatology furnishes the real instruments for the operation of the mind; it is important that these instruments should be of the best, and it is indeed working in the interest of science, for the progress of science, when we exert ourselves to improve our onomatology." Referring to the manner by which we acquire our knowledge in general, he points out the importance of a perfect onomatology for those who are beginning to devote themselves to the study of science. "The logic of science essentially adheres to scientific language. Science can not teach anything that is confessedly unscientific and false.

"In science we have to distinguish three things: The series of facts which constitute the science; the ideas which recall the facts, and the words to express the ideas. The word has to develop the idea, the idea has to embrace the fact: these are three impressions with the same seal. Since the words preserve the ideas

and transmit them, perfection in science is impossible without perfection in language.

"However true the facts may be, however correct the ideas developed by facts, only wrong impressions will be transmitted so long as the expressions by which they are communicated are not exact."

We shall honor the memory of these great men in the most dignified way if we make it our task to establish a scientific onomatology for medicine.

It is a fact that many designations in medical onomatology are incorrect, and therefore unscientific.

In language, everything is explained by logic or by history, which in itself is logic, and history affords an explanation of the corruption of medical onomatology.

In medicine there are many Greek and Latin words, on account of the fact that medical science originates in Greek and Roman antiquity. This classic element in onomatology has endowed medical science with an international character, and established a union of the various peoples to the best interests of science. It is a useful custom in medical literature not only to retain the terms which have come to us from the writings of the ancient Greek and Roman physicians, but also to coin new terms from the classic languages for new conceptions which were unknown to the Greek and Roman physicians of these ancient periods.

Most denominations are formed from the Greek, and there never was a language which admits of greater variety and greater distinctness of expression and style, of greater facilities in making combinations, than the Attic.

As the introduction of new appellations increased to convey new conceptions, more irregularities crept into our onomatology. In many respects the nomenclators of more recent times are the principal sinners by creating superfluous words, and disrespecting the laws of analogy and orthography.

The Greeks themselves are very reserved, very careful and exceedingly severe in admitting into their regular language a new formation which may be demanded by the exigencies of the times. Imagine how their linguistic sensitiveness must be offended, if in the foreign literature their eyes meet with linguistic barbarisms, invented and introduced by physicians who are quite unable to think in Greek. Numerous technical designations in medical onomatology are so incorrectly constructed that even the Greek must find it difficult to recognize the origin and significance of terms which are supposed to be Greek.

If nothing is done to check this evil, we are threatened by chaotic conditions which will aggravate the study of medicine, and render it a thankless task.

In 1821 L. A. Kraus published a critical etymological medical dictionary of names formed from Greek, but more particularly those which he had found to be wrong. Since the appearance of that book, complaints about the incorrect and hermaphrodite nature of many medical expressions have become general. The uninterrupted advance in medicine, especially since the introduction of bacteriology, made a necessity of a continuous production of new terms. Investigators and discoverers constructed new words without paying the slightest regard to grammatical requirements; they drifted into the habit of consulting a Greek dictionary, and welding together two or three single words, quite regardless of whether the new formations corresponded to grammatical rules or expressed the correct meaning.

Complaints about onomatological corruption form a standing part in modern medical journals. Virchow, in his Rector's address, called attention to this evil. Hyrtl, the greatest philologist among anatomists, published his Anatomical Onomatology, in which he characterized a large number of terms now in use as childish, absurd, and therefore unscientific. Henle tried to reform the anatomical onomatology. The German Anatomical Society has endeavored to establish a grammatically correct anatomical onomatology. A committee worked upon it for seven years without accomplishing the task the society had set itself. Indeed, all these attempts of earnest, learned men, commanding a thorough knowledge of classical philology, to improve upon our artificial language, were doomed to failure, and we shall presently see the reason why.

The presence of Greek and Latin terms in medicine made medical dictionaries a necessity. The oldest ones (the first of which that appeared in print was published in 1534) contained names taken over from the ancient Greek and Roman physicians, and in the course of time an ever-increasing number of Greek and Latin new formations were added.

And now we arrive at an important factor, to which nobody, so far as I am aware, has directed attention before me. The nomenclators whose new formations appear in our dictionaries did not or do not speak Greek; they knew or know only the written tradition, which means only part of the language, and did not take counsel with Greek contemporary physicians, who could have aided them. A most remarkable instance in this respect was the procedure adopted by the Committee of the German Anatomical Society, which worked for seven years holding conferences in Munich, Vienna, Goettingen, Strassburg, and Basle, but never in Athens. The Greek spoken to-day was left out of consideration; not even a look was cast into a modern Greek text-book on anatomy.

The fact of our having an unscientific medical language is to a large extent the fault of the philologers. They have tried to make us believe that Greek was a dead language, that the Greek as spoken and written to-day was a corrupt language, interspiced with foreign elements; men of great learning have made this assertion without knowing the spoken Greek of to-day. I may be permitted to adduce to you, Rectoribus Magnificis, the proof of the contrary being the case by presenting to you a book by the pen of Dr. B. Leonardos, *Ὀλύμπια* which has recently left the press. Just as it requires a German, or one who speaks the German language like a native, to evince true German linguistic intuition, it requires a Greek, imbued with the linguistic intuition of his language, to propose new formations of Greek words; and even such new formations can only be introduced into the scientific onomatology after having been approved or accepted by a large number of competent Greeks.

The international task of the University consists, especially in regard to medicine, in imparting to students a correct onomatology, and the fact of this being possible with the aid of the physicians of Athens I have demonstrated in numerous writings.

The language of an extinct civilized people, like the Baktrians, can only be communicated to posterity in one way, namely written tradition; the language of an uncivilized people like the Hottentots, again can only be transmitted in one way, and that is oral tradition; the tradition of the language of a living, civilized people, however, is two-fold: written and oral. These two forms of tradition exercise a mutual influence upon each other.

One of these influences is exercised by ancient lingual monuments upon later phases of the language, and the duration of that influence depends upon the extent of the ancient literature and the application which posterity brings to bear upon its study.

The study of a language like Greek should not be limited to the acquirement and investigation of one form of tradition to the exclusion of the other, because such limitation means an exclusion of one-half of the tradition, although both halves should be considered together as supplementing each other, in order to enable investigators to obtain a scientific understanding of both the old and the new phase of the language.

It seems reasonable to suppose that this should be clear to anybody, and that especially men of science would follow this rule in the study of a language. As a matter of fact, they do so in the scientific investigation of any other language except in Greek. In studying and teaching Greek, our philologers are unscientific; they only know the written tradition, call all words and phenomena in use to-day in Greece, but not contained in the ancient classics, modern Greek, and regard these words as not belonging to ancient Greek, although such words and phenomena are genuine, uncorrupted, and often unchanged Greek words of venerable antiquity. They do not know, and do not want to know, that the major portion of ancient Greek has percolated into the Greek of to-day by oral tradition only, and that the Greek thus orally communi-

cated is anything but modern Greek. The methods followed by these philologists are unscientific, faulty, and misleading. They have led astray the medical nomenclators.

By a simplification of the grammar, ancient Greek became the Greek of today; it was modernized. But with all this simplification, Greek remained what it was: the immortal language which developed from within, from its own elements, setting its face against the assimilation of foreign elements. It is the only language in Europe which requires no foreign words, and excludes foreign words.

Ever since men like Hatzidakis have published the history of the development of the Greek of to-day, there is no more excuse for the flagrant errors which are not only entertained by the world generally, but assiduously spread by philologists defaming the character of the Greek language of to-day. Nor is there any excuse for the fact that they attempt to kill Hatzidakis' writings by silence.

Men who have familiarized themselves with the Greek language and literature of the present day, are painfully conscious of the fact that otherwise scientifically educated men write on the subject of the Greek language of the present day without knowing it, writing in violation of all scientific principles, merely from hearsay.

Thanks to the preservation of the pure Greek language in the Greek spoken today, we may secure a scientific onomatology by taking counsel with our Greek contemporaries and their literature. For this idea I have unceasingly worked to kindle an interest ever since 1894.

In order to demonstrate how much could be done, even far away from Athens and without the aid of Greek colleagues, by simply consulting the current Greek medical literature, I have published in the MEDICAL BRIEF the commencement of Greek medical dictionary, and this simple presentation of a possible reform gave rise to an action which may well be chronicled as epoch-making in the history of medicine; the Medical Society of Athens took the matter into advisement. In its memorable meeting of April 14, 1907, under the presidency of Professor Geroulanos, it was proposed by Dr. Kallibokas to appoint a committee consisting of a number of physicians and a professor of philology, for the purpose of assisting in the reform of medical nomenclature. The motion was adopted, the committee was appointed, and the following names were enrolled:

G. Manginas, President.	A. Morelas.
A. Rose, New York.	I. Bistes.
Gabrielidis, Constantinople.	M. Oikonomakes,
D. Demetriadis.	P. Pampoukes.
S. Dontas.	I. Papalhesdoros.
A. Kallibokas.	S. Papasoterios.
I. Karabias.	B. Patrikios,
I. Kindines.	N. Petsales.
D. Kokkotes.	M. Sakorrhaphos.
G. Kosmetatos.	Th. Skases.
A. Kouzes.	Dem. Soteriados.
K. Lampros, Cairo.	B. Jouphexes.
K. Louros.	G. Trochanes.
M. Mankakes.	A. Iselios.
K. Melissinos.	I. Phoustanos.
V. Mermenkas.	S. Chomationos,
T. Mitautses.	An. Christides, Constantinople.

(To be continued.)

[Written for the MEDICAL BRIEF.]

Paralysis.

BY A. J. HALL, M. D.,
McKenzie, Ala.

A few days since the writer had a case of paralysis in the entire left side. I thought the case was hopeless, but I went to work to accomplish something, and to my great delight I had him up and about in about a week's time, notwithstanding the case was complicated with functional heart trouble, causing great distress from dyspnea. I gave strychnine, nitroglycerine, alternating every three hours with digitalis. I also gave about ten grains of pot. bromide every six hours, and while I claim no originality of the treatment, I will say it surprised me in its quick and efficient work. Any of you, brethren, with such a case, try the remedy.

[Written for the MEDICAL BRIEF.]

Diseases of the Breast.

BY ALFRED DE ROULET, B. S., M. D.,

Chicago, Ill.

Formerly Professor of Surgery and Diseases of Women in the Medical Department of Trinity University.

VI. TREATMENT OF CANCER OF THE BREAST.

In all cases of cancer of the breast where the disease is still sufficiently localized to render its complete removal a possibility, an immediate radical operation is imperatively demanded. Less radical measures simply entail the loss of valuable time and materially diminish the patient's prospects for ultimate recovery.

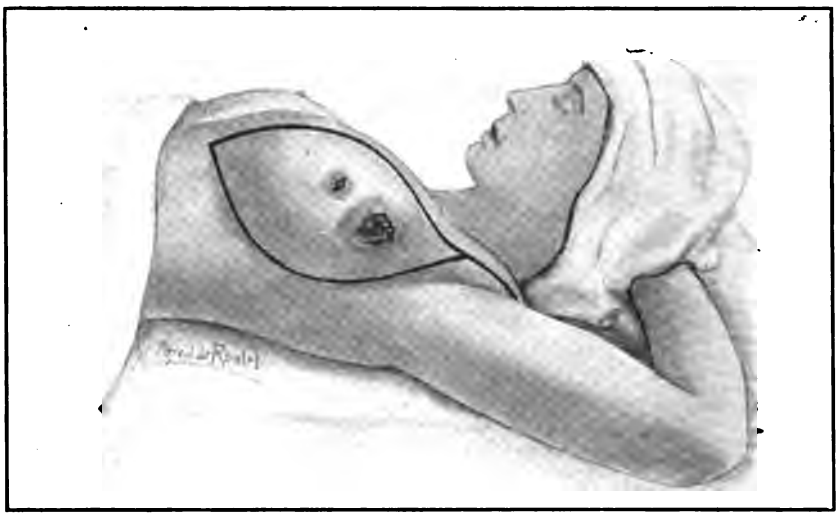

FIG. 1. Line of Incision in Radical Operation for Carcinoma of Breast.

In cases where the cancer has progressed to such an extent as to render the possibility of its eradication more or less questionable, as in those cases where there is a distinct involvement of the clavicular lymphatics, the indications for operation are not so clear. Very few cases which have reached this stage are cured, although some lives are undoubtedly prolonged by operation, and Halsted, of Baltimore, even reports a few cures. In cases of this class, I believe it is best to state the case frankly to the patient, and let her decide what she will do.

In cases where internal metastes have occurred, the eradication of the disease is clearly impossible, and radical operation is contra-indicated. In selected cases, however, it is permissible to remove sloughing tissues simply as a means of temporarily increasing the patient's comfort. In these inoperable cases, arsenic, the iodides, and mercury should be given freely, as they not infrequently tend to appreciably retard the progress of the cancer, although they are in no sense curative.

The application of the X-ray undoubtedly benefits many cases, and while I would not for an instant consider its use as a substitute for operation in operable cases, in inoperable cases it is certainly of decided value, even when it accomplishes nothing more than the healing over of superficial ulcerations, and the general relief of pain. In applying the X-ray, a medium tube should be employed, at a distance of from ten to twelve inches from the ulcer. The exposures should last from five to fifteen minutes, and should be repeated every second or third day. According to Eberhart, frequent short exposures produce better results than prolonged exposures at greater intervals.

The use of caustics in the treatment of cancer of the breast has little to recommend it, and much to condemn it, and, at the present time, is largely relegated to the advertising "cancer doctors." In preanesthetic days caustics were largely used as a substitute for operation, but

with the advent of general anesthetics they were promptly, and properly, abandoned by reputable surgeons.

In operating for cancer of the breast it makes very little difference whose particular technic is followed, the essential point being the extirpation of every particle of diseased tissue. This, of course, involves the removal of the entire breast, and the axillary and pectoral areolar and glandular tissue on the diseased side.

In Warren's operation, the surgeon begins at the lower angle of the wound, and works upward to the axilla, in this manner having the advantage of large, easy cleavage planes at the start, and the disadvantage of a bloody field of operation, and a certain loss of time in controlling hemorrhage.

In the Halsted operation, the dissection begins in the axilla, and extends downward to the breast. In this operation the dissection may not be easy as in the Warren operation, but the blood supply having been controlled in the beginning, the field of operation is comparatively bloodless, and the operator does not have to waste time in clamping or ligating divided blood vessels.

FIG. 2. Axillary Flap Dissected Up.

The Operation.—The patient is placed on her back with the arm abducted, the axilla shaved, and the entire field of oper-

FIG. 3. Breast Reflected and Pectoral Muscle and Fascia Exposed.

ation thoroughly scrubbed. If ulceration has occurred, the ulcer should be cauterized with either pure carbolic acid or the actual cautery and the ulcer packed or covered with gauze.

The incision should form an ellipse, encircling the tumor, the long axis being parallel with the direction of the fibers of the pectoralis major muscle. From the upper angle of the ellipse the incision is carried along the border of the pectoralis major to a point on the arm just below the point of its humeral insertion. (Fig. 1.) While it is desirable to be able to bring the edges of the wound together at the completion of the operation, it is not absolutely essential. Consequently, if the skin is infiltrated, a sufficiently wide area should be removed to insure the complete removal of all cancerous tissue, regardless of the subsequent closure of the wound. If the edges can not be drawn together with sutures, it is not a difficult matter to undercut the surrounding skin and slide the resulting flaps over the denuded surfaces. If for any reason this is not practicable, skin grafting may be employed.

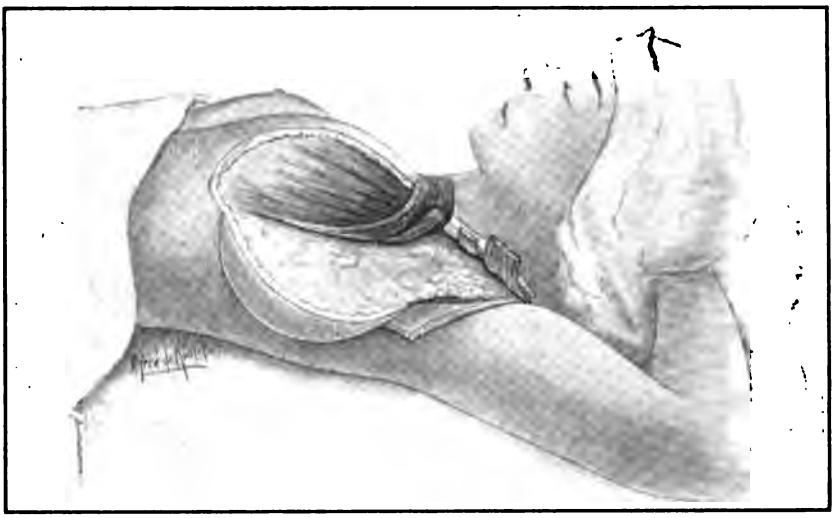

FIG. 4. Pectoralis Major and Minor Divided and Reflected to Facilitate Dissection of Axilla.

The primary incision is carried at once through the skin and fat, and a triangu-

FIG. 5. Dissection of Axilla Completed and Breast Ready for Final Separation from Thorax.

lar flap of skin is reflected well back toward the posterior axillary line. (Fig. 2.). The fat and areolar tissue lining this flap is dissected back to the border of the pectoralis major where it is continuous with the axillary areolar and glandular tissue.

The breast is next separated from the pectoral muscle, the pectoral fascia being stripped from the muscle and removed with the breast. It is not necessary to remove the muscle except in advanced cases, where it is involved in the cancer. The lymphatics along which the cancer spreads do not penetrate the muscle, but pass through the pectoral fascia, hence the necessity for completely eradicating this fascia.

After the pectoral fascia has been removed, the tendon of the pectoralis major is divided at right angles to the direction of its fibers, and the ends turned back. The next layer, consisting of the pectoralis minor, its fascia, and some loose connective tissue is now exposed. This fascia and connective tissue is dissected out down to the pectoralis minor, which is divided at a point slightly below its center, and the ends reflected. (Fig. 3.) The loose connective tissue under the tendon of the pectoralis minor must be very carefully and thoroughly cleaned out, as it is not only rich in lymphatics but is likely to contain lymph nodes already cancerous. This exposes the subclavicular structures, *i. e.*, the axillary artery, and axillary vein, which lies below and to the inner side of the artery.

The nerve trunks from the brachial plexus run parallel with but slightly above the blood vessels, while accompanying the vessels is a chain of lymphatics with connective tissue and fat. Beginning at the highest possible point under the clavicle, the axillary vein and artery should be exposed and stripped absolutely clean of all extraneous tissue down as far as the point of insertion of the pectoralis major. All small branches are ligated as close as possible to the main trunk, as they are exposed. In dissecting the axillary blood vessels it is best to hold the tissues in the fingers, and carefully push back the vessels rather than to attempt to hold the vessels and dissect off the tissues. The artery and vein being freed, with the left hand, sufficient traction being employed to slightly stretch the delicate fascia which attaches it to the chest wall. With a few sweeps of the wall, the knife hugging closely the ribs the mass to be removed is grasped firmly knife, this mass is stripped from the chest and serratus muscle.

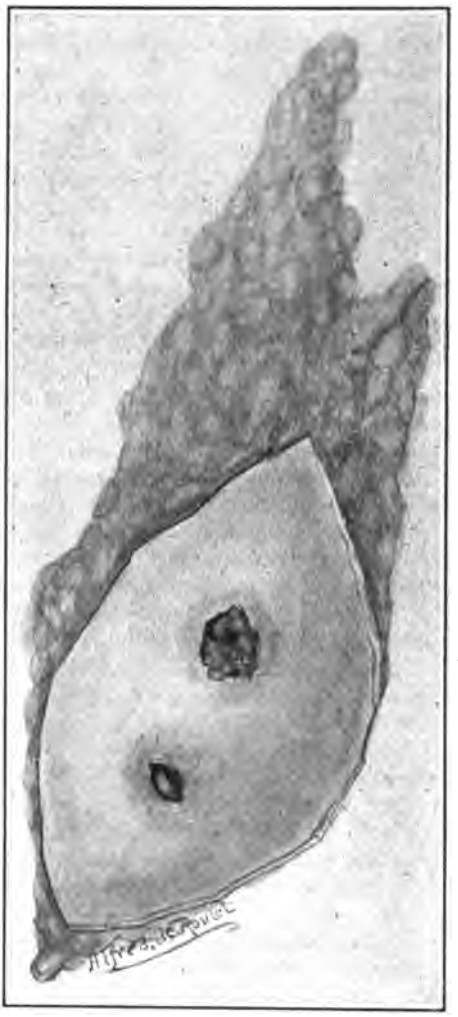

FIG. 6. Breast and Axillary, Fatty Areolar Glandular Tissue Removed En Masse.

Before reaching the junction of the posterior and lateral walls of the axilla, the original triangular flap of skin is drawn downward to facilitate the exposure of the connective tissue on the subscapularis, teres major and latissimus dorsi muscles. This tissue on the posterior ax-

illary wall is stripped off from within outwards, such subscapular vessels as are exposed may be tied before they are divided. The subscapular nerves may be divided or preserved as seems best to the operator, although it is probably better to preserve them. The entire mass, tumor, subcutaneous and axillary tissue is now removed in one mass. (Fig. 6.)

The ends of the pectoral muscle are now united with interrupted catgut sutures, and the wound closed. It is important that the triangular skin flap be applied closely to the fornix of the axilla to obliterate any dead space, and to preclude the possibility of the formation of a large mass of cicatricial tissue. This may be easily accomplished by crowding a large mass of gauze up into the axillary space, when the final dressing is applied. The after-treatment consists largely in making the patient as comfortable as possible. It is customary in most hospitals to redress these cases on the third day. In cases, however, where the patient is comfortable, where the temperature is below 99° F., and where there is no discharge or wound secretion showing through the dressing, I can see no reason for disturbing the dressing before the tenth day, at which time the sutures may be removed, and the patient allowed to get up. Early moderate use of the arm is rather to be encouraged, as it tends to prevent any subsequent restriction of movement.

During the operation, certain precautions should be taken to prevent, if possible, the reinfection of the wound with cancer. The dissection should, as far as possible, be carried out in healthy tissues, and every effort should be made to avoid opening up cancerous tissues. A knife or other instrument which has been in contact with the cancerous tissues should be sterilized before it is allowed to touch the healthy tissues, while unnecessary handling or manipulation of the tumor during the operation can not be too strongly condemned.

The mortality from the operation is approximately one per cent. The results of the operation are variable. Approximately forty per cent of all cases of cancer of the breast can be cured by radical operation, while probably sixty per cent or more of favorable cases can be permanently cured. Excepting in the most advanced cases, an operation which does not ultimately cure the patient will often prolong the patient's life from six months to three years.

1013 Venetian Building.

[Written for the MEDICAL BRIEF.]

The Well-Established Demand for Featural Surgery and the Attitude of the Profession Today.

BY CHARLES C. MILLER, M. D.,

Chicago, Ill.

A demand has been created for the skilled surgeon who can treat featural imperfections successfully, but the regular profession is taking no interest whatever in this field. It is most unfortunate that I must say this, for there is to-day in every large city the so-called "Beauty Expert," who is profiting greatly as a result of this demand, and if the general profession could only be interested in the subject, the cases which go to pay the advertiser good fees for poor services might be going to reputable practitioners, and they might be reaping benefits which they deserve.

Up to the present time, no surgeon in this country has manifested more than a passing interest in the important field of featural surgery, and I have found the great majority of the regular profession disposed to laugh at me when I tell them I find this field one of absorbing interest. This lack of interest will change shortly, and then we will find a body of men in this country devoting their attention to this subject, and I predict that so far as knowledge and skill is concerned, we will be able to enlist the most capable of the profession.

The newspapers and magazines have been developing the demand for featural surgeons for a dozen years or more, and there is no doubt that this is a permanent demand, for with the changes in the customs of the people, the importance of a presentable face is recognized.

The formation of the dimple artificially is one of the operations which the surgeon who interests himself in this class

of work will be called upon to perform in not a few cases. This operation is one which from the standpoint of justification we have comparatively slight grounds, and yet the operation is so simple, safe, and free from complications that I can not see the grave objections which certain men make to it.

Many featural imperfections are unsightly and repulsive, and no physician, except the most unreasonable, can object to their improvement, if such improvement is unaccompanied by danger to the patient.

The woman who desires a dimple formed is usually one who has more than the average degree of good looks, and, therefore, I can understand if certain

FIG. 1. Illustrating Location of Incision for Formation of Dimple, Dotted Circle Representing Area of Infiltration.

pedantic ones might object to "meddling with Nature," but, as I have said before, these women will set their heart upon having dimples, and as the operation is unaccompanied by risk, I have been unable to resist the urging of certain of my patients.

It is my practice in these cases to thoroughly scrub the cheek, and then after having the patient smile, select the point where a dimple should form under ordinary circumstances. This point may be found if the patient is caused to elevate and draw outward the angle of the mouth. I mark this point, and insert my hypodermic needle. With the hypodermic, the tissues should be infiltrated for a radius of about one-half inch. For this purpose about one-half drachm of a one-fourth of one per cent solution of cocain is used.

A very narrow-bladed scalpel is passed through the tissues, the line of the puncture being parallel to the long axis of the face. This puncture is only about one-tenth of an inch in length, and should not exceed under any circumstances one-eighth of an inch.

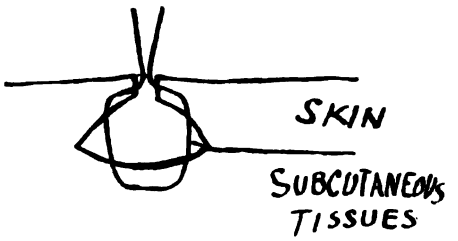

FIG. 2. Illustrating the Dissection Beneath the Skin in the Operation for Formation of the Dimple and the Manner of Passing Suture to Invert the Skin.

The point of the knife is carried into the cellular and fatty tissue of the cheek, and then these tissues are drawn up with a very small hook and snipped off. The amount of tissue excised is hard to describe, as, to a certain extent, this is a matter of judgment. The snipping away of the tissues beneath the skin should be followed by the out-turning of the skin, and the cutting away of a certain amount of the deeper layers of the true skin, so that the tissues will dimple after healing occurs.

No suture is passed in the simplest operation. The opening is covered with a very small piece of cotton, and then it is sealed with collodion. A slight dimple will be left when healing is complete, and if this is properly situated when the patient laughs or smiles, it will deepen

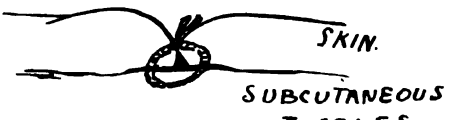

FIG. 3. Illustrating Operation for Formation of Dimple After the Suture Has Been Tied.

naturally, and the patient has, to all appearances, a normal dimple.

Where no tendency whatever exists for the tissues to dimple, the operation described may be insufficient, and it may

be necessary to turn the skin in somewhat by a suture. This suture should invert the margin of the skin, so that a dimple may be formed which exists whether the individual be smiling or not. The disadvantage of forming a dimple which may be present at all times lies in the fact that dimples of the cheek ordinarily show only when the individual laughs or smiles.

70 State Street.

[Written for the MEDICAL BRIEF.]

Relationship of Influenza and Malaria.

BY JOSEPH D. HARRIGAN, M. D.,
New York City.

Frequently we read of diseases as being related together, but seemingly, the full significance of such relationship fails to make the impression upon us that it should.

Although a kinship between certain of the epidemic diseases has been admitted by innumerable observers to exist, it has, apparently, been traced no farther than the surface.

It has usually ended by the acknowledgement of a family resemblance, just as one would trace the lines in a couple of photos, and has there and then yielded nothing further on which to base a claim of an actual, bona-fide blood relationship.

Take, for example, cholera and miliary fever.

Zuelzer states: "With regard to cholera, a certain relation between it and miliary fever has been accepted by some writers. In the earliest cholera epidemics, Hufeland called attention to their resemblance to the Sudor britannicus. * * *" Similar statements have been made repeatedly, thousands of times, with regard to "resemblances" acknowledged to exist between many varieties of epidemic disease.

But, instead of attempting to trace back the genealogy of these forms of disease, and thus eventually arriving at the basic ground-work common to them all, and which alone makes possible a "relationship," or even a "resemblance" between them, the most strenuous efforts of present-day observers is apparently directed towards the illogical and impossible task of proving that there is no relationship. This is plainly to be seen in the more and more arbitrarily drawn lines of distinction between forms of disease, that, as time goes on, become more sharply defined, and which tend to render the claim of "relationship," or even mention of a "resemblance," absurd.

If we would be successful in our efforts to establish and prove the existence of a relationship between certain forms of epidemic disease, it is of the utmost importance to compare the symptoms and pathological conditions found in one with those found in another of nearest "resemblance." If, as the result of this comparison, a sufficient number of symptoms or conditions are found to agree and to be identically the same in both, then we can regard these common symptoms, etc., as the basic ground-work of the two forms of disease, necessarily dependent, of course, upon one common cause.

These basic symptoms and conditions common to two or more forms, would constitute the essentials upon which the entire relationship must rest.

However, as we are well aware that there are wide variations in the forms of epidemic disease, it becomes of the utmost importance to compare more especially the *essentials* present in the different forms, and be guided by *their* agreement, rather than be misled by differences arising from disagreement of mere *accidentals*.

It would simply mean the extension of the very same principle that we make use of in our investigations of the varieties of intermittent fever.

Thus, as Hertz says:

"The form and the local affections of pernicious (intermittent) fever appear sometimes to depend upon external or individual causes. During the hot season of the year disturbances of the nervous system and of the digestive apparatus are most common, during the cooler season, those of the respiratory organs. Present or previous disease of certain organs, or *special influences brought to bear upon them*, may determine the localization of the symptoms."

Now, if this holds good, as it certainly does, with regard to the various forms of

intermittent fever, the exclusion of various other forms of epidemic disease from consideration as part and parcel of the same fever, merely on the basis of differences in accidentals, is absolutely unscientific.

The position held by those present-day observers, who, on the strength of presence or absence of the accidentals of disease, would manufacture new diseases for every deviation, is totally illogical and untenable.

If these diseases, such as intermittent fever, influenza, cholera, miliary fever, relapsing fever, etc., have so many characteristics in common as to be looked upon as belonging to the same family, it must be because of the presence of certain pathological processes common to them all, and, to all intents and purposes, identically the same.

The amount of confusion and error arising from classifying diseases according to their accidentals alone, is inconceivably great.

Take, for instance, again, the difference between miliary fever and cholera (certain forms).

The striking symptom in the one case is profuse sweating, in the other profuse diarrhea.

These are mere accidentals of the disease, readily comprehensible as applications of the principles of "points of least resistance," and of "parallelogram of forces." With all the remaining symptoms almost exactly identical, it seems absurd to consider these two affections as anything else but forms of the same disease. Were we to discriminate similarly between the forms of intermittent fever, on the basis of accidentals, some new and wonderful embellishments of our medical nomenclature might be anticipated.

The importance of adhering strictly to the essentials, in comparing diseases, in order to trace their relationship, is all the more necessary, in that, by a process of elimination we can pass through the series of complex developments, down to the simplest form, thus rendering much easier our quest for the cause of disease.

And it is only by getting down to the simplest forms and thoroughly mastering them in all their details that we can expect to accomplish the elucidation of their etiology.

Thus it is not by taking up the pernicious forms of intermittent fever that we are able to arrive at the clearest and most easily understood definable causes of the disease; it is by means of the study of it in its simplest forms that we can arrive at anything like a satisfactory result.

Then comparing this simplest form of intermittent with its nearest resembling "relative," we can very readily ascertain which of these two is the simpler, and, by the usual process of elimination, arrive finally at the basic essentials upon which we can feel reasonably certain the whole structure of "related" family diseases rests.

If now we can ascertain the cause of these basic pathological conditions, and find, by comparison, that it agrees with any one particular cause in the more complex forms which, in its essentials, the logically-deduced observations of many distinguished scientists would lead us to consider as pre-eminently correct, we would take a long step forward in our progress towards the solution of the intricate problem of epidemic disease.

The etiological factor of greatest prominence and importance in simple, ordinary intermittent fever, has been for ages considered to be an emanation arising from marsh lands, and known to us as marsh-gas, methane, or carburretted hydrogen. Now, if we were to take influenza as the nearest relative to simple, intermittent fever that we know of, we would expect to find as the principal factor in its causation some similar chemical to carburretted hydrogen, or at least, some preparation of hydrogen.

The fact that influenza is an extremely near relative of intermittent fever, is, in fact, one of the forms under which malaria in general manifests itself, and of which intermittent fever is likewise in itself only a part, may not appeal to one with the same full significance as it does to the writer, but let any one compare together the symptoms of both these diseases as it has been my privilege to do in recent issues of the BRIEF, and it will surprise him to find that in all the essentials they are identically the same.

In fact, influenza can be regarded in the light of such comparison, as the simplest form under which malaria manifests itself.

Influenza being a world-wide affection, it might seem at first thought impossible to accept with equanimity the statement that it is one of the malarias. But any one is at perfect liberty to prove for himself that the statement is absolutely true. Compare the essentials found in influenza with those of any of the malarial types. You will find that they will all agree—not, perhaps, in severity of operations—but they will agree nevertheless down to even the splenic, the hepatic, the enteric, the renal and other changes.

But even admitting that in the essentials influenza agrees with other forms of malaria, the identification as a malaria would be incomplete without a similar identification of the causative factors.

And, furthermore, inasmuch as influenza is a world-wide affection, the etiological factor in the production of the disease must be world-wide also.

In other writings upon the subject of influenza, I have made the statement repeatedly that this disease is due to the earth's passage through enormous masses of gaseous chemicals in space. These invisible clouds of gas are encountered in a manner similar to the encounters of the earth with the swarms of meteors with which astronomical history has made us all familiar.

These gases are the product of innumerable conflagrations that have raged throughout the universe in past ages, and, encountered by the earth in its career, impinge upon the earth from east to west.

This point alone in the theory of space-born epidemics harmonizes completely with the known facts regarding the course taken by influenza. Developing suddenly at different points of the earth's surface, it rapidly travels from east to west.

But the point which is of the utmost importance to us and upon which I wish to lay particular stress, because of its remarkable significance in connection with the subject of this article, is that relating to the composition of these enormous clouds of gas encountered by the earth.

We know that scores of most distinguished observers have attributed to marsh-gas or carburretted hydrogen the baleful property of producing malarias.

What should we expect to find as the principal feature of the gas clouds of space, if they cause epidemics of disease and if influenza, as can be clearly shown, be a malaria?

Why, certainly, some form of hydrogen.

But where does this hydrogen come from?

Where else but from the "new stars," those remarkable outbursts of flame in the heavens, that for ages have filled the minds of our astronomical confreres in the scientific world with awe and wonder, and which Bickerton, the celebrated Australian astronomer, claims to be due to the enormous friction resulting from the collision of two dead stars in space. "Partial impact" is what he calls this tragedy of the heavens whereby a new star is born.

The friction caused by these enormous masses on impact develops a temperature of millions of degrees, and the gaseous products of the resulting process are sent whirling through space in vast clouds.

This is what Professor Langley says of these "new stars" in his "New Astronomy:"

" * * * The fact is recognized, that, if we have observers enough, and look closely enough, the appearance of 'new stars' is not so rare a phenomenon. Every one at all interested in such matters remembers that in 1866 a new star broke out in the Northern Crown so suddenly that it was shining as bright as the Polar star, where six hours before there had been nothing visible to the eye. Now all stars are not as large as our sun, though some are much larger, but there are circumstances which make it improbable that this was a small or near object, and it is well remembered how the spectroscope showed *the presence of abnormal amounts of incandescent hydrogen*, the material which is, perhaps, the most widely diffused in the universe (and which is plentiful, too, in our own bodies)," etc.

Now whatever the reason for the tremendous flare-up in the heavens, it is a

fact indisputable, and it is also a fact that the spectroscope recorded the presence of vast quantities of hydrogen.

Enormous volumes of this lightest of gases, propelled by gigantic forces, must, naturally, having been ejected with a velocity above the critical, have escaped from the zone of attraction, only to wander in space in the shape of invisible clouds, until finally they impinge upon such bodies as our earth, bringing destruction and desolation everywhere wherever animal and vegetable life abound; thus we have our epidemics, as likewise our famines that go hand in hand with disease.

This great combustive process in space has happened probably thousands and thousands of times—if not millions.

Thus Professor Langley says "of these 'new stars' the examples may almost be said to be growing numerous, two having appeared in the last two years (1889)."

It can readily be seen that, with such processes going on for thousands of years, an inevitable encounter from time to time between these clouds and the earth must ensue. These gases must partake of the nature of volcanic gases, of which it must be recalled a considerable portion is made up of hydrogen.

But we all know that these gases are extremely deleterious to health and life.

Take, for instance, one of them—hydrogen sulphide. According to Professor Witthaus, this gas has a specific gravity of 1.19.

"*Occurrence*—In volcanic gases; as a product of the decomposition of organic substance containing S.; in solution in the waters of some mineral springs. * *

Toxicology—An animal dies almost immediately in an atmosphere of pure H_2S, and the diluted gas is still rapidly fatal. An atmosphere containing one per cent may be fatal to man, although individuals habituated to its presence can exist in an atmosphere containing three per cent. Even when highly diluted it produces a condition of low fever and care is to be taken that the air of laboratories in which it is used shall not become contaminated with it.

Its toxic powers are due primarily, if not entirely, to its power of reducing and combining with the blood-coloring matter. The form in which hydrogen sulphide generally produces deleterious effects is as a constituent of the gases emanating from sewers, privies, burial-vaults, etc.

These give rise to slow poisoning as when sewer gas is admitted to sleeping and other apartments, by defective plumbing, or to sudden poisoning, as when a person enters a vault or other locality containing the noxious atmosphere."

Mephitic air is what was held in olden times to be the principal factor in producing many diseases of an endemic nature. This air was considered as arising from the earth at different times, particularly at the time of earthquakes and producing widespread disease. Thus Noah Webster states: "I have suggested * * * that epidemic diseases may be sometimes occasioned by a vapor extricated from the earth * * * the sickness and death of fish are strong evidences of the truth of the principle." * * *

* * * In the account which Sir W. Hamilton has given of the eruption of Vesuvius in 1794, Univ. Mag. October, 1795, it is observed that "after every eruption of that volcano, we read of damage done by mephitic air, which, coming from under the ancient lava insinuates itself into low places, as cellars and wells near the foot of the mountain."

"Several instances happened after the eruption of 1767, of persons going into cellars and being struck down with this vapor, who would have died without assistance. This vapor, on an open field, subsides near the earth, being heavier than common air; but it fills cellars, wells and hollow places, so as to endanger life, and actually proves fatal to birds, beasts and vegetables; sometimes to men."

Numerous instances of diseases of epidemic nature, due to volcanic gases, could be cited, but for lack of space must be omitted.

Sufficient has been said upon the subject, however, it is to be hoped, to show that many of the most distinguished observers during past times were thoroughly imbued with the theory that many

of our epidemics were caused by mephitic air. Had they taken into consideration the fact that the foundation cause of all our malarias is, in all probability, carburetted hydrogen, and that the main chemical make-up of volcanic gases is hydrogen, it would, in all probability, have prompted them to compare the essentials of the two sets of diseases, and thus have caused them to investigate more closely these essentials that undoubtedly are the groundwork of the family relationship that must, because of a common etiological factor, exist between them.

And now if we of the present time go a step further, and finding the theories of a terrestrial origin for that greatest and most universal of the epidemics—influenza—totally inadequate for its elucidation, seek in space an explanation, we shall find in the volcanic gases through which the earth plunges in its career, ample and sufficient grounds upon which to base a thoroughly satisfactory conclusion.

Summing up the facts and theories in the matter, we find that:

1. "The various malarias have been considered by most responsible scientists as due to carburetted hydrogen.

2. "Influenza, judging from a comparison of its essentials, must be one of the malarias.

3. "Influenza, if it is one of the malarias, must be produced by a similar cause.

4. "The earth passes in its career through clouds of volcanic gases, which, as we all know, are made up principally of either free hydrogen or in combination.

5. "From the known effects of hydrogen, as exemplified in the malarias, we must expect to find widespread epidemics of disease similar to the malarias affecting the world at certain periods, due to this passage of the earth through vast clouds of this gas."

In conclusion, permit me to add that this theory satisfactorily explains the course of influenza from east to west; the simultaneous attacks at points widely separated from each other on the earth's surface; the variations in the accidentals of influenza, due to the variations in the atmosphere of different localities attacked; its undoubted relationship to the malarias in general; its periodicity; its connection with famines, meteorological disturbances, etc., as likewise supplants the mythological *influence* of the ancients, with a thoroughly satisfactory and adequate scientific substitute.

To those who might be tempted to ridicule a connection between medicine and astronomy, let me say that some of the greatest scientists of the past as well as of the present, recognized the fact that the human body simply reflects the Cosmos, is governed and is amenable to same laws that rule the universe in general; is part and parcel of it, in fact. Hence, any attempts to explain the various phenomena transpiring in the body and known to us as disease without bringing to bear upon the study a thorough general knowledge of, and application of, the same laws that maintain in a study of Nature, in all her beauty, both terrestrial and extra-terrestrial, must fail.

In terming the body a microcosm, the ancients chose well a name for what is, after all, but a reflection of the great Cosmos.

668 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

The Relations of the Science of Chemistry to Medicine.

BY HOWELL B. GWIN, M. D.,
Nashville, Tenn.

CHEMISTRY ANSWERS THE FRATERNAL APPEAL OF MEDICINE IN DETERMINING THE PRESENCE AND TREATMENT OF POISONS.

The whole field of toxicology here opens to view. Poisons may be within or directed to the system. The analytical chemist has pointed out, in many ways, poison in medicines, in food, in the blood, urine, stomach and excretions, taken ignorantly or knowingly; and in the interest of benevolence or justice he has contributed to its exposure and suppression. How necessary that physicians have at their finger's end the antidote of poisons! I knew a case of poisoning in Virginia to which was promptly called a physician who, ignorant of the antidote, ran

to his office to consult his authorities, but on returning he found his patient *in articulo mortis*. It may be that in future toxicologists will, as specialists, share with physicians the responsibility of this practice—a responsibility fearful in legal cases, and moral as well.

CHEMISTRY, AS BY CONJUGAL BONDS, ENDOWS MEDICINE IN THE STUDY OF THOSE SUBSTANCES INVOLVED IN RIGHT LIVING.

This introduces the whole subject of hygiene. Happily, at this day, hygiene has gained strength enough to maintain an independent position as a science. To know and to counteract the causes of disease before they become effective is evidently the triumph of our profession. We wage unending crusade against ignorance of the laws of health and intemperance of all kinds which heretofore have been too powerful for us; but no crusade ever called forth more devoted warriors than ours. Diseases are but perverted life-processes. By time and rest, that innate *vis medicatrix naturæ*.

"Which hath an operation more divine
Than breath or pen can give expression to,"

reduces the perversions back again to physiological limits, and health is restored. We can not pass through the crowded streets and alleys of our cities without recognizing the proofs of this in the children's faces, and this dominant vitality gives us heart even where our work seems most hopeless. The effects of disease may be for a third or fourth generation, but the laws of health are for a thousand. To this beneficent law of our Creator we owe the maintenance, the beauty and form of our race in the presence of so much that tends to spoil and degrade it.

Remembering that our definition of medical science embraces "the prevention of disease," we remark there is a true medicine and a false medicine.

The true is that which is based on the unalterable laws of Nature; the false, that which is the result of ignorance, unconscious misinterpretation, or willful error, ignorance of Nature, unintentional misunderstanding of her laws, willful falsification of facts to subserve some temporary purpose. To winnow the one from the other, to acquaint with law and enjoin its observance, is our high prerogative. Once the imposter-priest was also the imposter-physician, and the patient was kept in the dark—the blind led the blind, and both fell into the ditch. Now, to both light is given, "knowledge is power," and the day dawns for the reign of common sense, illustrated by the Chinese race, which pays the physician when his patron is well and stops his pay when his patron is sick.

A celebrated physician, on retiring from a successful practice in Paris, announced that on a certain day he would recommend, as his successors, three eminent physicians. Everybody was on the *qui vive*. Many a physician hoped his name would appear in the list. The day came, the names were printed—they yet live—they are among

"The few immortal names
That were not born to die,"

they are "Dr. Quiet, Dr. Diet and Dr. Exercise."

The true chemist is not a meddler with "vital force," nor does he believe that "chemical force" should dominate it, nor that his substances have essential efficacy. He will not usurp the physician's prerogative. He refuses to assert with Paracelsus, that "the true use of chemistry is to prepare medicines." A student of nature, he will not rashly aid or resist it, but puts a check on the improper use of chemicals whose severe action he so well knows. And hence, Dr. Quiet as a chemist, prescribes rest for the repair of injuries. It is the eye of the comparative anatomist that discovers the greatest capacity for repair of injuries to belong to those animals in which the whole of life is carried on at the lowest rate, and in the nearest approximation to rest which is compatible with animality—in animals which breathe water. It is the eye of the chemist which explains this to be due to the scant percentage of oxygen, promoter of activity of function and rapidity of rate of vital processes. Now, if active respiration, if excess of oxygen, can be avoided in certain lesions of the body, a chief condition of its reparation pre-

vails. This is the office of sleep, Nature's sweet restorer.

The physical basis of the Sabbath is this chemical law that secures repair by the reduction of oxidation—a principle employed by the physician when he reduces the frequency and force of the heart's action. May not the increase of paralysis and other nervous diseases, be due, in part, to our fast living—to the neglect of Dr. Quiet's general and generous prescription?

Dr. Diet, as a chemist, as well as a physiologist, prescribes: First, air—Air is the medium in which all vital processes, both of plants and animals, takes place, and in which all human activity has its seat. The physicist gives it the properties of matter, and tells us that two forces ever act mightily on it—a centrifugal and centripetal—heat to drive it off forever, and gravitation to draw it down forever. The chemist describes its constitution. It is a mechanical mixture and not a definite chemical compound. Its chief constituents are oxygen and nitrogen gases, proportioned about one to four, almost absolutely constant. The other ingredients are fluctuating, but as essential as O and N. Its composition is thus represented: O 20.61, N 77.95, carbonic dioxide .04, aqueous vapor (average) 1.40, nitric acid, ammonia, carburretted hydrogen, traces =100.00.

Now, this air is kept pure by Him who "hath gathered the winds in His fists, who hath bound the waters in a garment." The animal and vegetable kingdoms mutually preserve the equilibrium; the animal receives the oxygen rejected by the "lungs" of the vegetable, and the vegetable feeds upon the carbonic dioxide rejected by the lungs of the animal. Oxygen is the active element of the atmosphere. It is the promoter of combustion, which, as already said, is simply a process of chemical combination. Burning and decay are but different forms of combustion. Oxygen is the "universal cement" by which the other elements have been joined together to form that grand and diversified whole which we call the earth. Life is an untiring builder, oxygen a fell destroyer whose energies are aroused by combustion (and decay). If, contrary to nature, oxygen be highly active where it should be only partially active, or passive, dissolution will occur according to the degree of its abnormal activity.

The chemist insists that nothing shall disturb this beneficent order of nature —that the air must be kept pure in all inhabited apartments and localities—that ventilation, drainage, antiseptics, disinfectants, must be employed to prevent both an excess of noxious gases and a lack of the necessary aqueous vapor.

Second, water—Water is *the* liquid of our globe. It forms the greater part of all organized bodies from the lichen to the oak, and from the polyp to man. No less than four-fifths of our bodies are water, which fact justifies that description that "the physical man consists of merely a few pounds of solid matter distributed through six pails of water." How a fatigued man craves water when much has escaped through excess of perspiration, and how intense is the thirst of one weakened by the burning of (proper description) fever!

Who can estimate the value of the cleansing, nutrient, stimulating, solvent or propulsive property of water? The chemist, who fixes its constitution and demands that it shall be kept as pure as nature provides from her brewery. As it holds in solution the substances from which the crustacese form their shells and the coral polyps build their reefs, as it fills the cavities of the rocks with gems and their fissures with useful ores, so it carries the elements of food through the system from which by chemical processes every cell of every tissue its own nutrition appropriates to construct "the human form divine."

Alas! how much sickness has been entailed upon families and communities by the use of water which has filtered through the refuse and filth of the kitchen, the privy, the sewer, and the cess-pool. The chemist is closely studying this matter, and from time to time voices his warning to and through the physician.

Third, food—This subject is too fertile for treatment in a brief space. Fortunately, its leading points are famil-

iar. Liebig and others have given and are giving valuable fruits of chemical study to the physician and the public. To avoid trichinæ, how shall our animals be fed, and how shall the meats be cured and packed? How shall the cattle plague be stayed? How shall we suppress food-adulterations? Shall a chemist be appointed to test our fertilizers and oils, and not our food? Shall we eat butter or oleomargarine? What kind of yeast powders shall we use? Shall every housekeeper use a lactometer? How shall we improve our cooking, partly a mechanical but chiefly a chemical process? How—the questions are too many. Answers are coming in from chemists. Liebig answers this question: How may we supply the want of alkali and ptyaline in children who are growing up without mother's milk? The diseases of the young are, in large part, preventable diseases. Sanitary laws must be known and enforced. No sanitary code exists—none so careful and detailed, like that imposed upon the Jewish people at the time of the exodus by the maker and builder of our frames.

Food is a chemical compound. The materials of animal food may be divided into three classes: Non-nitrogenized substances, such as starch and sugar; nitrogenized substances, like lean meat and eggs, and lastly, fatty substances, like butter. To those may be added a small proportion of earthy salts, found in almost all varieties of food that do not properly form a class. All three classes are necessary to the support of human life. Milk may be regarded as the type of animal food. It contains: Water, 87; casein, 4¼; butter, 3; sugar, 4¾; ash, ¾ = 100—sugar is non-nitrogenized, casein nitrogenized—and the fatty substances. Bread consists of starch, gluten and fat one to two. No article of food that does not contain all three of these substances can alone support life for any length of time; but different amounts are required under different circumstances, such as climate (an Esquimau takes and needs twelve pounds of tallow candles at a meal), physical activity, occupation, temperament, and for the right balance of one's food one is guided by experience, and in cases of decline or weakness by the skill and science of the physiological chemist. How necessary that the practitioner have an intelligent insight into all that is involved in this.

Fourth, Doctor Exercise is a Chemist.—(*a*) He walks his patient into the sunlight. *Whence the source of heat?* The sun. *Whence the source of force?* The sun. What untold chemical force in light! O blessed sunbeam, how do men slight thee, and refuse thy kiss upon their pallid cheeks and wasting forms, and the flash of thy healing within their chambers and cellars, prisons and infirmaries, swamps and forest-massed house yards? Light is the fountain of life; it is the symbol of Heaven; Heaven is health—"there is no night there." Truly, the light is sweet, and a pleasant thing it is for the eyes to behold the sun. Lavoisier, father of modern chemistry, said: "Without light nature were without life and without a soul; a beneficent God by it strewed the surface of the earth with organization, with sensation and with thought."'

(*b*) He bids his patient tread upon healthy soil. Thus is shunned the exhalations of swamps, of the debris of drifts, and of deposits of offal.

(*c*) He puts his patients to regular work. "Six days shalt thou labor" is a part of the fourth commandment as much as "Remember the Sabbath day to keep it holy." "We commanded you that if any man would not work, neither should he eat"—then work is necessary to life. The advantages of this are so obvious, it is unnecessary to enlarge. Finally,

CHEMISTRY STIMULATES MEDICINE.

In its incidental influences it exacts a mental stimulus. Its positive teaching tends, first, to free the mind from superstition, ignorance and error. It reduces a sagacious guess to the level of the prophecy of a quack. It purges medical teaching of much that is unchemical, and hence misleading, *e. g.*, it is even now assaulting the doctrine of "Catalysis" and seeking its banishment to the limbo of vanity, there to herd with Phlogiston (why should physicians yet "darken counsel with words" by speaking of the "phlogistic" treatment?) and

many other and younger as well as older unsubstantial Idola Theatri. It tends, second, to impel medicine to maintain itself as a science if its partnership with chemistry shall be on terms of equality. While giving due credit to other sciences, medicine must not permit them to fix a limit on the study of disease. In ages gone by Hippocrates had to vindicate the study of disease from the inroads of superstition; at the present day, we have to guard it against assaults of science (or "science falsely so-called"), and need to watch lest we betray it by accepting a too chemical or physical limit to our thoughts. It tends, third, to make the public more intelligent and reasonable, and law-abiding and appreciative. It is a relic of the dark ages to practice upon a man as if he were a block of wood or a blockhead. It is a blessed reformation to teach the sciences in our schools and colleges, needing yet to be perfected by the addition of experimental to theoretical teaching. Should not this science be honored by more thorough study in our medical colleges?

CHEMISTRY IMPRESSES A MORAL INFLUENCE UPON MEDICINE,

and in return receives this from medicine. In throwing a thousand side-lights on this complex being, man, possessed of organs by which alone he can work his earthly work, whether that work be that which he shares in common with the beasts of the field, or that through which he can enter into conscious relation to his unapproachable Creator, the chemist and the physician alike declare him to be "the paragon of animals, in apprehension how like a god, in action how like an angel."

Our mutual studies lead us in humility, reverence and homage (according to that Titan among scientists, Sir Isaac Newton), "to deduce causes from effects, till we come to the very first cause, which certainly is not mechanical," and all along we need to pray with Bacon, "May He grant us a true vision of the footsteps of the Creator imprinted on His creatures."

428½ Church Street.

[Written for the MEDICAL BRIEF.]

The Most Helpful Faith.

BY R. C. CAVE,
St. Louis, Mo.

The various theories of existence, however they may differ in their details, may all be classed under three general heads, viz.: Materialism, orthodox theology and divine immanence. Of these three, which gives the faith that is most helpful?

Materialism denies the existence of the spiritual, and holds that what is called soul is the result of a particular organization of matter. According to this faith, the universe is the product of blind force; "the world rolls round forever like a mill," and man is the "frail and feverish being of an hour," destined to sink into eternal nothingness. In such a faith there is nothing to incite men to courageously fight life's battles and bear the world forward on the tides of progress—nothing to inspire the hope by which the world's true work must be done. Instead of inciting to noble endeavor, it chills enthusiasm by declaring that all endeavor must end in nothing. It kills man's holiest aspirations by telling him they can lead only to bitter disappointment. It gives no basis for friendship and mutual service, save such as may be found in the helplessness and hopelessness common to the creatures of a day. It logically robs love of all spirituality, and makes it a mere animal passion which can not survive the loss of physical attractiveness. Surely, the faith which thus denies the existence of all that is spiritual and gives man nothing better than a charnel-house to hope for, can not be the faith by which to walk in order to attain the highest manhood.

We turn, then, from the hopeless faith of materialism to the faith of orthodox theology. This denies that the world is a blind machine, "grinding out death and life and good and ill" without "purpose, heart, or mind, or will," and teaches that all things proceed from and are governed by a supreme being whom it calls God; but its God is disappointing. He fails

to accomplish the good which he himself is said to desire, and fails to satisfy the most unselfish longings of his creatures. He gives life to millions of beings, most of whom he can not, or will not, save from endless torment. According to orthodox theology, as some writer has said, "the Creator really intended to do a good thing in the way of making the world and its inhabitants, but somehow everything has turned out badly. His plans have been balked, and, in sheer despair or anger, he has given us over, while he allows his saints or his saviors to act as wreckers, and gather in a little wreckage before the final sweeping away of the whole concern. When it urges religion as the salvation and hope of mankind, it means nothing more than the rescue of a moiety in the life to come." Such a faith may bring some sort of satisfaction to a man who fancies himself one of the moiety to be saved, and is so thoroughly selfish that he cares nothing for the sufferings of the millions who are lost; but I fail to understand how it can comfort and inspire any true and noble soul. Better than that, it seems to me, is the faith which denies a future existence, and, while depriving the few of endless bliss, saves the many from endless misery. I can see little that is ennobling in a faith that would influence man to be perfectly happy in the orthodox heaven, with the knowledge that countless thousands are being tortured in the orthodox hell.

But there is a faith which seems more helpful—more conducive to right living and noble character—than that which is found in the teaching of either materialism or orthodox theology. It is faith in God as a wise and loving Spirit resident in nature, and unfailingly making for righteousness; faith in a divine power working by and through natural laws in all things, and slowly but surely bringing good out of seeming evil; faith in this divine power as so present and efficacious in the universe that there can be no such thing as real failure anywhere. This faith recognizes the incomplete and imperfect, but sees in all things the tendency to perfection; and, amid the perplexities of existence, it relies, with unwavering confidence, on the Divine immanence who is leading all to good as the final goal. This faith gives comfort, hope and courage, and incites to the highest and best. Impelled by it, man, instead of seeking to save himself by believing dogmas, observing forms and relying on a savior's merits, will earnestly co-operate with the Divine Spirit in nature, and, through such co-operation, live most truly, come into moral accord with the eternal, and find the highest happiness.

3928 West Belle Place.

[Written for the MEDICAL BRIEF.]

Typhoid Fever.

BY J. H. MAQUARD, M. D.,
Clare, Mich.

I would like to give my experience with a family of seven members, all down with typhoid fever. The first patient was the mother of two children, who was sick with septicemia from premature confinement. She made a good recovery. Then followed the mother of the family, also the daughter, with two children, also the eldest son (who had prodromic symptoms). He began having a temperature of 104⅖° F., and on the seventh morning 102° F., and eighth morning 98½° F.

The mother had grave lesions of Peyer's patches up to the twenty-eighth day, with temperature of 102° F. The mother became so deaf that she could not hear a sound, yet she and the whole family made good recoveries. The family lived six miles from the city; yet I made forty-two visits to see the family.

If I fully outlined my treatment it would take too much space, therefore, I will only state that I kept the renal glands well toned up, and thus kept down uremic poisoning. I kept turpentine emulsion moving, heavily charged with subnitrate of bismuth. This had a healing effect on Peyer's glands. About the fourteenth day I gave large doses of quinine, alternating with strychnine, 1/32. I also sponged patients with alcohol four or five times a day. Owing to the bad sanitary conditions, I think I left a good record of recovery.

[Written for the MEDICAL BRIEF.]

Tapeworm — An Interesting Case, Both in Diagnosis and in Treatment.

BY GEO. F. G. MORGAN, BACH. DIVIN., M. D.,
San Francisco, Cal.

Yesterday I went out to the United States Marine Hospital, at the Presidio, San Francisco, to visit a medical friend and attaché of that very excellent institution. While there my attention was called to a very ingenious, positive, speedy and efficacious method of diagnosis of, and treatment for, tapeworm.

A sailor patient in the hospital mentioned to one of the medical attendants that he had been troubled with tapeworm, some of the evacuated segments of which he had seen in his feces, from time to time. This statement was reported to Dr. J. D. Long, passed assistant surgeon in the marine branch of the United States service. Dr. Long has lately returned from the Philippines, where he has made himself quite an enviable name as an expert on human intestinal parasites.

Dr. Long immediately took interest in this particular case. He closely examined and questioned the patient, but could discover upon him no positive signs of tapeworm.

Dr. Long was not to be thus easily thrown off the track of one of his special foes. He decided that if there were a tapeworm there should be eggs in the bowels. This he would find out by the aid of the microscope. Dr. Long obtained some fecal ejections of the patient, and put them under the microscope.

Lo! The eggs of the tapeworm, plainly to be seen. Therefore, the positive proof that the egg-producer was in the bowels. Now, the positive diagnosis having been made, the following intelligent, scientific and speedily successful treatment was adopted:

The patient received no food the first day, as a preparatory act. At about one P. M. of the second day the patient was given a gelatine capsule containing ten minims of chloroform, this capsule having first been heavily coated with salol. The object of this salol-coating was to prevent the capsule from being dissolved before it reached the intestine. By this expedient the whole force of the chloroform was thrown upon his wormship, which forced him to let go his hold upon the bowels.

About two o'clock the patient experienced a painful, burning sensation about the upper part of the transverse colon, a giddiness and dizziness of the head, obscuration of vision, and a marked fall of the pulse. This Dr. Long had expected and provided for by cautionary directions to the nurse in attendance, who was ordered to administer spiritus frumenti, one ounce, in case these symptoms came on, as expected. The case progressed finely.

A good dose of Epsom salts was now administered to the patient, and shortly after four o'clock of this (the second) day a copious evacuation brought forth his tapewormship entire.

It measured thirty-six feet and some six or eight inches long.

Dr. Long is to be congratulated upon the extreme simplicity and positiveness of his diagnosis, and upon the ingenuity, directness, rapidity and effectiveness of his treatment.

The Doctor will keep this case under observation, and in about one month from now will put the patient's fecal ejections again under the microscope. If, upon repeated microscopic examinations, no more eggs can be found therein, the cure will have been proven complete.

3440 Twenty-second Street.

[Written for the MEDICAL BRIEF.]

The Pharmacopœia as Seen by One General Practitioner.

BY J. LEVERETT, A. B., M. D.,
Yonkers, N. Y.

Why is not the United States Pharmacopeia more popular with the physicians? Why do not a larger proportion of prescriptions call for pharmacopeial drugs? Is there any good reason on the part of the physician why he should not use the pharmacopeia more? Is there any good reason for its lack of popularity?

When a student graduates into a full-fledged physician he has passed an exam-

ination in *materia medica*, and that *materia medica* is composed, principally, if not entirely, of pharmacopeial drugs.

The first few years in practice he is gaining experience, has time to study his cases pretty thoroughly, and is prejudiced in favor of the pharmacopeia. He gets familiar with certain drugs which, in this combination or that, appear to influence certain conditions for good. Certain others, which he has been taught to depend upon, have failed him, and a proprietary has seemed to turn the trick.

At the end of eight or ten years he has quite a pharmacopeia of his own, limited, to be sure, but composed of drugs which he feels that he can depend upon, some official, and non-official.

One of these is, perhaps, tincture of digitalis or tincture of belladonna, or tincture of aconite. He has gotten way beyond the text-book in these drugs, and his dosage does not depend on a memorized strength, but on the effect which he has been accustomed to get from a certain quantity.

Just now a revision of the pharmacopeia becomes authoritative, and he wonders why his prescriptions containing these tinctures do not have the effect he has learned to expect. He now learns that the strength of these tinctures has been materially decreased. He makes a mental note of this, and tries to arrange his prescriptions accordingly, but he has come to think of tincture of digitalis as an entity with certain effects, and not as a certain percentage of the crude drug, which in its crude form, has never entered into his experience and, therefore, he finds himself more or less at sea when writing prescriptions containing that tincture. What wonder, then, if he falls back on a proprietary which he has until now used but infrequently, but which he feels it is to the interest of the manufacturer to keep at a standard strength, and which, therefore, he can depend upon. But for the next changes in the pharmacopeia we are not to wait ten years. The druggists are clamoring for an annual revision, to be issued in a supplement. But, you ask, what have the druggists to do with it? Is not the pharmacopeia in the hands of the physicians?

For answer, let us look at the composition of the Revision Committee. Fifteen druggists and eleven physicians, and of these physicians more of them theorists than practical men.

Am I trying to block the wheels of progress? Not at all. A revision every year, if you choose, but make it in the interests of the physician. Let the changes be the adding of new preparations, and the cutting out of obsolete ones, but hands off the old standbys.

But why should the physician make a fetich of the pharmacopeia? We can see why the druggist should be interested, and why he should wish that prescriptions be limited to a certain list of drugs, but since when have the physicians been in leading strings, to be dictated to by any body of men, whether they are called a committee on revision, or a committee on new and non-official preparations?

The physician's business is to carry on the battle against disease, and to use the means, whether official or not, which will give the victory to his patient. It is the business of the pharmacist to see that the drugs furnished on prescriptions are what the physician expected his patient to receive, and it is not his province to try to tie the physician down to a certain set of drugs. The individual physician has to shoulder the responsibility in each case, and his hands should be perfectly free.

[Written for the MEDICAL BRIEF.]

Jaborandi.

BY JEROME D. DODGE, M. D.,
Collinwood, Ohio.

Pilocarpus is the official name of the drug more commonly known as jaborandi. The dried leaves are mainly used. The plant is native to Brazil and Uruguay, in South America, is found in the West Indies, and has been successfully raised in Italy.

The pharmaceutical preparations are the fluid extract, tincture and "specific medicine." The alkaloid pilocarpine, in the forms of hydrochlorate, hydrochloride, hydrobromate, nitrate, acetate and phosphate is also used. The dose of these

salts is one-tenth to one-half grain; of the fluid extract, ten to thirty minims; tincture, one to three drachms, and of "specific medicine" we add from ten drops to a drachm to four ounces of water, and give a teaspoonful of the solution every one-half to three hours, as indicated.

Jaborandi and pilocarpine have an effect almost identical, which is profuse sweating and salivation, in sufficient dosage, due to action on the glandular system. It sometimes increases the flow of milk in nursing women. On the pupil of the eye, pilocarpine acts as a myotic or contractor in the strength of one to four grains to the ounce, and is often employed for this purpose.

Pilocarpine is the physiological antidote to atropine and agaricin.

A telephone lineman was once brought into my office suffering from an overdose of atropine which he had taken by mistake. He afterwards told me that he took about half a teaspoonful of a solution which his doctor, later, told me was of two per cent strength. Luckily, it was taken on a full meal and within the hour I saw him. It required two men to support him while coming into the office. He acted precisely like a man suffering from an overdose of hyoscine, trying to pick things out of the air and muttering incoherently. I evacuated his stomach thoroughly and gave him pilocarpine hypodermically, and strong, hot coffee to drink, but he soon lost consciousness. His breathing and pulse became natural after a time, and in the morning he was well recovered.

This drug is said to act as a powerful stimulant to the growth of the hair, whether it be applied to the scalp or taken internally, and the new growth is often very dark in hue.

Hypodermically, pilocarpine is employed to remove opacities in the vitreous humor of the eye, and for the relief of thickening of the tympanic membrane.*

Dr. Kent O. Foltz, in *Dynamical Therapeutics*, says that he has found no remedy that causes such rapid absorption of non-organized vitreous opacities as jaborandi. He prefers the oral use of jaborandi to pilocarpine hypodermically. He states that "The use of jaborandi has given good results in tobacco amblyopia." In rheumatic iritis he has had splendid results from its use. In optic neuritis, detachment of the retina, choroiditis, and in atrophy of the optic nerve, the drug has given him good results. In iritis, from any cause, he finds it useful. In syphilitic diseases of the middle ear, in connection with specific treatment, he uses it with good results, both in relieving tinnitus and improving the hearing. In nervous deafness and that following diphtheria and scarlatina, he finds it useful. He has found it the most useful of remedies in treating non-suppurative otitis media of the proliferous type, and also for the restoration of the ceruminous secretion. Its benefits are produced by the increased secretion in the aural cavities. He finds it especially valuable in tinnitus aurium, and this action of the drug is confirmed by Dr. Lyman Watkins. It is indicated in dry conditions of the ear. It has been used, with care, in cardiac and renal dropsy. It has removed serous effusions from whatever cause, and is of value in asthma, bronchitis, albuminous diabetes, chronic rheumatic affections and puerperal septicemia, when no contraindications exist. "It is so powerful and certain in its diaphoretic action that it has taken rank as the most reliable of the remedies of its class."

Pilocarpus has been used successfully in diphtheria, erysipelas, diabetes insipidus, dropsies, aphthous sore mouth, poisoning, chronic parenchymatous nephritis, uremia, psoriasis and other dry forms of cutaneous diseases, and syphilitic affections. Care must be used lest it cause pulmonary edema.

"During the sudorific action of jaborandi the quantity of urine is lessened, but if it is given in divided doses, instead of acting as a diaphoretic and sialogogue it becomes an active diuretic."

"Experience with the sphygmograph, made at various periods during the action of the drug, has shown an almost complete asystolia, with a very considerable diminution of vascular tension. M. Robin is led to believe that jaborandi has an especial action upon the vasomotors,

*The National Standard Dispensatory — Hare, Caspari, Rusby.

which it paralyzes, whence results the cardiac asystolia and copious secretions of sweat and saliva."

*Because of this action on the heart it should be used with care in cardiac diseases lest it cause dyspnea, and even asphyxia.

Webster, in *Dynamical Therapeutics*, says that "the value of jaborandi in acute articular rheumatism is probably not equaled by that of any known remedy." The intense pain of acute articular rheumatism, he says, "may often be permanently relieved by it in an hour's time, and the inflammatory condition speedily dispelled." He advises: "In acute cases, when the pain is severe, twenty drops of the specific medicine in a swallow of water at a dose, and repeated in half an hour, if free perspiration or relief from pain does not follow the first dose. After this," he says, "from one to two fluid drachms may be added to four ounces of water, and a teaspoonful given every hour. When the pain is not very severe the large dose in the beginning may be dispensed with." He further says: "Under judicious dosage it is our most valuable arterial sedative, promptly controlling febrile action, lowering the temperature, and promoting normal secretion from the skin, lungs and kidneys, while the circulation is equalized and an agreeable sensation of coolness and comfort is imparted to the general cutaneous surface. It is thus valuable in all forms of fever not marked by great adynamia, and in inflammatory conditions its general effect is attended by amelioration of the local hyperemia of highly satisfactory character. We probably do not possess another as valuable agent in inflammation, attended by sthenic conditions, as this in the entire *materia medica*. In inflammatory rheumatism, from the most active forms, where the tissues are swollen to fullness of the skin, and the pain is excruciating, to more passive forms, where joints are swollen and stiff, but not exceedingly painful, there is nothing else in the *materia medica* like it for promptness of action in relieving the local symptoms. Under its influence, though here a few full doses may be needed, the most severe pain subsides, and swelling and redness are soon gone—not that there need be redness to indicate it, for many of these cases may be so subacute as to be pale and painless, though the joint may be swollen and stiff. Some of these patients may be able to be about their daily avocations, though complaining of swelling, soreness and stiffness of the joints. I find jaborandi to be the best prescription here. Since diaphoresis favors parturition, jaborandi has here a useful field. The feet should be made warm, and perspiration induced. The severity of the pains is often ameliorated, with rapid dilatation of the os and satisfactory termination of the labor."

In the treatment of acute colds, fevers, bronchitis, pneumonia or pleurisy, jaborandi may be combined with either aconite, veratrum, gelsemium, lobelia or ipecac; it may be made an adjuvant of acetanilide or used alone, according to conditions present. It acts as a depressant and should not be used in adynamic cases.

There are some fifteen species of the drug, two being principally used, and substitution of inferior species for the best is said to be common.

*American Dispensatory—King and Lloyd.

[Written for the MEDICAL BRIEF.]

Tobacco Smoke—A Warning.

BY W. W. HOUSER, M. D.,
Lincoln, Ill.

I feel moved to sound a note of warning in regard to a source of infection which I have not yet seen referred to in all the many "danger signals" sent out by any of the learned professors, boards of health, or other experts.

I refer to smoke, and more especially to tobacco smoke. I believe all agree that smoke is minute particles of carbon, resulting from incomplete combustion.

There is no good reason why these floating particles of carbon should not be carriers of innumerable germs of consumption, pneumonia, influenza, etc.

Many smokers are infected with consumption, pneumonia, influenza, and other infectious diseases peculiar to the nose,

throat and lungs. The very passages these little carbon balloons are made to travel in the almost universal habit of smoking, and we are all compelled, on the streets, in the cars, depots, hotels and all other public, and many private places, as well, to take this same smoke, second handed, and probably disease-germ ladened from some badly diseased and infected mouth, nose, throat or lungs, and breathe it into our mouth, nose, throat or lungs. So why should this not be a most fruitful source of infection.

And, if the ordinary consumptive is to be kept off the streets and out of the schools; why should not this other walking source of distributing infection be suppressed.

It is revolting enough to know that in place of inhaling pure life-giving, vitalizing air, to which we are all entitled, you are taking into your mouth, nose, throat and lungs the exhalations from some dirty, black mug, you have just passed on the street, to say nothing of it being ladened with deadly germs, liable to lead you into a lingering and loathsome disease to your death.

The dust theory of conveyance of infection seems to be well established. So, if it is true that the deadly microbe is floating around promiscuously in the air, what is more reasonable than that tobacco smoke should become loaded with them in its passage through the air, even if it was free of them when it left its human chimney.

To me it is an unaccountable inconsistency for ladies, as well as gentlemen, who would think it an unpardonable offense against table manners to help themselves to food with the knife or fork with which they are eating, to sit in a room filled with tobacco smoke directly from other people's mouths, and when asked if the smoke is offensive, promptly reply, "Oh, no, not in the least."

If that is not "straining at a gnat, and swallowing a camel," hair, hump, bad smell and all, then I am no judge of good taste.

My plea is that no person has a right to contaminate the pure, God-given air, with a substance as offensive, as foul, and as disease producing as is tobacco smoke?

[Written for the MEDICAL BRIEF.]

The Present Status of Medical Practice.

BY W. T. MARRS, M. D.,
Peoria Heights, Ill.

When the Pharisees of old claimed to have a corner on all the religion in the world at that time, they set a pace which has ever since been followed by many people in religion and medicine as well. It should be remembered that the two went hand in hand until modern times, and were under the dominion of soothsayers and the priesthood. It is unfortunate that neither subject, with all our learning, can be made clear by tangible demonstrations. Hence the diversified opinions and practices of those things that concern man's spiritual and physical welfare.

There is today as much unrest and uncertainty as to the correct management of disease as there was even a few centuries ago. The writer is not unmindful of the fact that the treatment and prevention of disease has made some few strides of which the profession may justly feel proud. But that medicine has not gone forward in a general and convincing way, is evidenced by the great and ever-growing number of physicians and "curers" of different faith. The brevity of this article precludes more than a cursory glance at a few of these. In referring to them I am, in some measure, guilty of uttering platitudes and oft-told tales.

Recently I read a little osteopathic literature, and from it, together with what I have from time to time picked up, my opinions on this subject have become more crystallized than ever. I am at a loss to understand how these astute gentlemen can find so many depressed ribs, dislocated vertebræ and anchylosed bones in general; so much osseous tissue impinging upon nerves and other soft but vital structures. Here is a bit of argument that is, I think, incontrovertible: If a bone, say a vertebra, is turned crosswise and fastened down by the adhesions of years, it seems to me to be a Herculean feat to straighten it around by manipulative procedures. Osteopathy has a

fair measure of success, but I'll wager my meager summer's wages that it is not due to the prying into plumb of misplaced ribs and vertebræ. The spinal pummeling, leg-pulling and general massage quicken the circulation, and perhaps materially affect the process of nutrition and repair. These things being tangible, a strong suggestive influence is brought to bear upon the patient's mind. This factor should ever be borne in mind. To heighten it, this class of physicians are usually men of refinement and erudition and their pleasing personality, coupled with their exorbitant fees, cause them to be looked upon with much favor.

The homeopathic parodox of what will make a man sick will likewise make him well is about exploded. Intelligent men no longer give the infinitesimal potencies with the idea of getting results from the remedies, *per se*. The writer has demonstrated the inertness of many of the little pills by swallowing them in considerable quantity. The homeopath is usually a scholarly physician, and is a good surgeon. When he wants the patient to know that he is taking something our homeopathic brother departs from the absurd Hahnemannian laws, and does not give a medicine produced by diluting a drop or grain of some drug in a barrel of water. As I have before pointed out, the homeopath very carefully searches out symptoms, and directs the treatment toward them. The patient associates his symptoms with an alleged specific, and thus the *cure idea* is better established in his mind.

Among the numerous irregular physicians and healers we may mention vitopaths, vibrationists, psychotherapists, Christian Scientists and faith and mental healers. Among this class the Christian Scientists seem to be gaining ground, and have more devotees than ever before. In fact, all these dispensers of healing succeed in bringing a fair measure of relief to all their patients who are ill from ailments that are non-surgical in character, the underlying cause being that they arouse their patients' subjective faith. The fact that I wish to emphasize in this connection is that the agency of the mind is significant in all cures, no matter what system of medicine is employed. Psychotherapy and suggestion should not be made a hobby, but it is a matter that deserves more general recognition from all physicians.

Why are there so many followers after strange gods in matters medical? Why can not those who sail under the "regular" colors adopt all that is good from the various schools and cults and eliminate everything that is useless or questionable? Our thousands of new remedies and rather complex surgery put our profession today on tentative grounds—the laity call it guessing. We have faced about on so many lines of treatment, introduced so many fads and so much quasi-science, to say nothing of the needless operations and "exploratory incisions," that many people have, in self-defense, turned to more benign methods. This condition would not prevail if we were more unified; and we would be more unified if there were fewer authorities (?) foisting their ideas upon us each year.

This, then, in brief, is the situation confronting us at the present day. Not a pleasant one to contemplate, it is true, and it will require eons of time to correct it. Prejudice and conceit should find no lodgement in the minds of true physicians, and the education of the people along medical lines should keep pace with scientific research. Education, and not legislation, is the only means whereby we may hope for a betterment of the medical status. The people are incapable of acting wisely on these matters because of the conflicting and chaotic opinions among those who profess to know.

These remarks are not prompted so much from a spirit of pessimism as from that love which chastiseth.

[Written for the MEDICAL BRIEF.]

The Dispensing Problem.

BY CHARLES E. BUCK, M. D.,
Boston, Mass.

Who shall dispense the medicine? Who shall hand to the anxious patient the balm for which he has paid his money, and from which he justly expects relief from his suffering? This subject has been jostled back and forth between pros and

cons for so many years that it seems as though it had become an almost lifeless, battered theme, and it is like a renaissance to call it to life again; but, battered and torn as it is, from the many jabs which it has received at the hands of all extremes of logicians who have toyed with it, there yet appears one or two lines of argument which have not been fully exhausted.

The subject is one which is very broad in its general scope, and infinitely more so in its specific aspects. Many factors appear which seem to constantly block the way to a satisfactory solution, and it hardly seems probable that one will readily appear, when the conditions which influence a physician in the conduct of his business, are, of necessity, so varied and potent. It does not really seem to be so much a matter of what one should do, as what one can do; and the consideration of the subject from this point of view would seem to furnish the most logical, if not most universally accepted solution of the matter. The location of one's practice, whether it be in the city or country, its proximity to a convenient base of supplies, whether it is scattered and requires long drives to cover it easily, or concrete and quickly reached from the office. The customary routine of the older predecessors, if they were at all popular, together with the personal ability in pharmacological lines, all have influential bearing on the case.

A city practice will admit of prescription writing much more readily than will an isolated or scattered country clientele, where the doctor must necessarily carry his remedies with him, for the reason that the country people have always had their remedies delivered to them in that way. Every other doctor has done so, and it is not always a safe procedure to disturb existing conditions, especially so when these conditions are not of a particularly evil nature.

Even though a physician may be so situated, that he would like to dispense his own remedies, his training may have been of such a nature as to specialize his abilities otherwise, and he finds himself unable to work along these lines in a satisfactory manner. He has no alternative then, but to consult some of the many commercial *materia medicas*, of which he has many at hand, and get what consolation and aid from this source that he can, to aid him in h's dilemma. Oftentimes this procedure may prove fairly satisfactory, but, generally speaking, it is of too unilateral a nature to act as a reliable dependency, and the doctor who does so is apt to find himself a one-sided man in a many-sided profession.

There appears, also, another, and in many respects a most important factor, which should be considered by the physician, when he is attempting to make up his mind as to which course he will follow in this matter. It is the social feature, and to this he must have an exceeding care.

He should, first of all, be of such a temperament as will permit of his establishing his own course of business conduct and identity. This once established, he should not vacillate, unless he has occasion to do so of his own accord, when he should find that he is in the wrong in some of his dealings.

As to his relation with his pharmacist, that should be considered from the view of their own preferences, governed, of course, by the existing contingencies. If a physician is going into a new place to locate, and wishes to receive the co-operation of the druggist to help him increase his practice, there is no choice left him but to favor said druggist with all the prescriptions that he can consistently write. If, on the other hand, he finds it necessary to look more to the general good-will of his patients, and has the starch in his spine to endure the enmity of this same druggist, and his wife, and all her friends, why he can start in on a dispensing career, if he knows how. If he is in the city doing a transient office business, he should, of necessity, dispense. If he is in the country, where all the tact that he has must be exercised to keep everybody in good nature, he should keep in with the druggist; for just let me whisper from experience, that that town "poobah" can do things to a new doctor in the shortest space of time imaginable, which will make this young scion of Hippocrates weep in anguish.

In fact, it would seem that, view the subject as we may, there is only one con-

clusion upon which all can agree, and that is for those who still adhere to the older methods of prescribing, such procedure must be followed as best suits their individual needs.

Physicians practicing in a locality where conditions are ideal, both as to prices and collections, can not well advise those who are not so favorably situated; and, again, the conditions under which some physicians necessarily practice, do not admit of any choice in the matter; they must dispense whether they wish to or not, if they have any success with their cases.

It is a deplorable fact that the various schools of medicine are not awake to their duty in this matter. If they would only require a certain degree of proficiency in pharmacology from the applicant, in his entrance examination, or rearrange their curriculum so as to graduate men who are thoroughly familiar with standard United States Pharmacopeia preparations, and the indications for their uses, this subject would not be so much of a bugbear.

195 West Brookline Street.

[Written for the MEDICAL BRIEF.]

The Diet Question.

BY O. A. PALMER, PH. D., M. D.,
Cleveland, Ohio.

In the consideration of this subject which has been discussed by men in all ages, many false conclusions have been reached, and these have been made the basis of many great errors which have gone down through the history of mankind and caused a great amount of sickness and death.

To simplify this subject as much as possible I wish to say that food is taken for the express purpose of supporting the body, and whatever the body needs should be obtained in the most convenient way, so as to prevent all extra wear and tear upon the organism, and thus preserve its energy, as a certain amount of energy or life force is used up in taking and preparing food for restoring the material destroyed during the activities of life.

I am a firm believer in the sacred records as to the origin of man. I believe that he was organized from the earth. The first man was named Adam because he was formed out of red earth, which, in Hebrew, is Adam.

It is not difficult to determine the elements constituting the human body, and there is no dispute upon this subject. An analysis made by one of the most careful modern observers shows that the body is nearly all water. A body that weighs one hundred and fifty-six pounds is all water but about twenty pounds, which is the solid matter of the system. The twelve inorganic salts and the four organic materials make up this twenty pounds.

All foods coming directly from the earth are the most likely to contain the ingredients necessary to support the human body, as they are from the same source; in fact, man can not be supported from any source except from foods that come from the earth, either directly or indirectly, and the only question in regard to this subject of diet is whether mankind shall exist on foods containing elements best prepared to support the body, or whether he shall live upon the material that contains a large quantity of refuse matter. All materials coming from the earth that do not undergo decomposition, such as wheat, oats, corn, nuts, etc., are the ideal foods, because they contain exactly what is necessary, with water, to support the body without sufficient refuse material to damage the organism.

The great question which has been discussed so much is whether man shall live upon foods obtained from the earth directly or indirectly, such as meats. Modern research has shown that all of the materials taken indirectly contain from twenty-five to forty-three per cent more refuse materials than those taken directly from it, that this refuse material becomes a source of great danger, and is the cause of much suffering. All meat products, whatever the method of preservation, are subject to rapid decomposition as soon as life is extinct, hence they become very unsafe food materials. I do not question that meat can be taken, and man can exist as he always has, but I do question its safety as a food.

It is sometimes said that meat is necessary for producing men of endurance and courage; that meat is an essential element of the diet of soldiers, but the endurance and bravery of the Japanese refute that claim. The Japanese, as a nation, are bright of mind, quick to perceive, active, courageous, strong to endure the privations of soldier life.

As the prime object of the diet is the support of the body, it is the height of wisdom to exclude all materials, from whatever source, that contain any elements of uncertainty and danger. It has been demonstrated that we have directly from the earth sufficient materials that have not the elements of danger contained in meats. Because meats have been used as food is no argument that they are valuable, for almost every kind of refuse material has been taken as food, and we are too well informed now to believe that all kinds of refuse materials should be used in making up the diet of man.

In illustration, many writers use the engine, saying that it matters not what is used for fuel; that any material will produce a certain amount of steam, fill the ash-boxes, and produce sufficient energy to run this engine. Any practical engineer will ridicule such illustration, for he knows the quality of the fuel determines the amount of energy or steam-force that can be obtained from it. Certain elements have more heat and more energy that others, and they should be used in preference to materials that have a large quantity of ashes and very little energizing force or ability to produce steam. Because an engine has been run with the poorest material on earth, is no reason why the present generation should be foolish enough to continue such practice.

I am not willing to admit that instinct is superior to reason, because reason is more than instinct, and when man is properly educated his reason will corroborate what he has learned are the best methods of diet. We say that animals are governed by instinct, they have no ability to go beyond certain articles of diet which are derived directly or indirectly from the earth. Man's instinct is altogether different from that of the animal. The instinct of the present generation is the result of long education of past generations, and has been greatly deranged by the methods of living that have been enforced from infancy up. The infant's instinct for milk and water is natural, and they are products it should have, and when properly given, are very satisfactory nourishment.

At this point I wish to discuss the main foods that supply the body. The air is one of the principal elements on which humanity exists. Man can live for weeks without solid food, yet he can not exist for even a few minutes without air, and the fact that more space is given to the handling of oxygen than of any other element that goes to make up the body is evidence that it is of greatest importance.

The structure of the lungs, exposing to the air one thousand four hundred square feet of surface which takes in this valuable food, the act of respiration being governed by stronger muscular action than that of any other food-handling act, are evidences of the great importance of this element. The lungs contain seven hundred and twenty-five million air cells, which should be constantly bathed with pure air. I can safely say at this point that no one will question that pure air is of first importance. That humanity has lived on impure air for a certain length of time, and in the filthy air of cities, homes and hovels does not disprove the fact that pure air is of first importance, and since no food is of value unless it is transformed by the energy of oxygen this life-giving and life-sustaining element is of first importance.

Food from whatever source is of no value unless thoroughly oxygenized. In the lungs the venous blood is purified, or, in other words, carbon dioxide and water are thrown out and oxygen is taken in. The majority of athletes of this country have died of consumption because their lung capacity was not able to oxygenize the materials needed for so strong a physical development.

The heart and lungs are indispensable in preparing food for nutritive material. Nature has endowed these organs with a large amount of untiring energy to carry on respiration and circulation. All are well aware what an effort is required

to check respiration. This wonderful force is exerted mostly upon inhalation, which is principally muscular, while exhalation is due to the relaxation of the muscles and the elasticity of the structures of the chest. If there is not sufficient muscular ability to take in enough air to oxygenize the food and properly cleanse the venous blood, perfect blood-building and transformation can not take place.

More attention should be paid to the development of the lungs so that they will have sufficient absorbing power to take in the necessary quantity of oxygen. It has been determined that from the diseased conditions of the air-tubes and cells of the lungs their absorbing ability is diminished from fifteen to forty per cent. Unless all of our food elements are perfectly oxygenized and the venous blood purified, perfect nutrition can not take place. In order to have normal nutrition we must have all the functions of the body in good working condition, the proper food well digested, perfect oxygenation and the proper elimination of all excrementitious materials. Any suspension of proper atmospheric influence certainly causes the first stage of disease which is devitalizing to all the tissues, thus preventing normal nutrition. Oxygen is of first importance in sustaining the human system, and when properly handled does no damaging work, but is always a building agent, preparing the body for its normal activities.

The second most valuable food agent is water. Since the greatest part of the human body is composed of this liquid, holding in solution all the materials that go to build the body, with all those that are injurious to it, the normal quantity and quality are of paramount importance. Perfect nutrition is impossible unless food elements are properly oxygenized and held in solution so perfectly that every cell can readily absorb what it needs to sustain its existence. Blood, like milk, contains eighty-seven per cent water, but this percentage should be sustained. If the quantity of water becomes too great, the excretory organs throw it off, but if water becomes deficient, the poisonous materials are not thrown out of the body, and the blood fails to nourish and sustain it.

Water is the most important of all the liquid foods, and it is the greatest tonic that can enter the human body. It assists in building up the organism, in repairing its tissues when worn out, it maintains the proper bulk in both the blood and tissues, rendering them soft and mobile. Water is the natural beverage of man, and is the only thing that slakes his thirst, cools his blood, whether in warm weather or in fever. Water is the only true food solvent, and promotes the circulation and accelerates the activity of all the excretory organs. It passes from a fluid form to that of vapor, and is the means of keeping down the body temperature, which would otherwise rise to a point dangerous to our existence.

Water should be used to the amount of six pints daily to supply that lost by the skin, kidneys and lungs, and should be increased to twice that amount in wasting diseases. Water is absolutely required for the secretion of all the digestive juices, saliva, gastric juice, bile, pancreatic fluid and intestinal secretions.

Modern research has demonstrated that pure, soft water is the only fluid ever intended for man's needs. Waters containing large quantities of salts of various kinds have to be handled by the different structures of the body, and in many instances are a source of damage. Because man has existed on water charged with all kinds of materials, both beneficial and harmful, is no reason, in the light of modern research, that he should continue their use.

The next most important food elements for the body are what may be termed mineral matters. Mineral matters are solid foods. These are alkaline and earthy salts which must come directly from the earth in order to be perfect in their action. In a man of average weight are seven and a half pounds of mineral matter, most of which is in the osseous framework. Mineral matters are absolutely essential to life. Without them man can not exist for thirty days, even if he takes all other classes of foods. He should take nearly one ounce, or about four hundred grains daily.

Iron, lime, soda and phosphorus are the most important minerals. Phosphorus plays a very important part in nutrition; it is very useful in the organization of the bony tissue, and is absolutely essential to all cell activity. The bones, brain and nerves are richly supplied with this element.

Foods are usually classified as hydrocarbons, carbohydrates and protein matters. The hydrocarbons, such as oils and fats furnish the heat and energy. The carbohydrates, such as sugar and gums, have very nearly the same action. The protein matters, such as eggs, peas, grains, gelatine and meats, to a certain extent, are tissue-builders. The functions of food are to supply the animal heat, energy for work, and the elements for growth and replacing of wornout tissue. The animal heat of the body is supplied by all foods containing carbon which is found in fats and oils, sugars, starches and some in the proteins.

The greatest difficulties in considering the diet question have been on the nutritive value of food. Modern research has furnished us a standard of value which is called the caloric. It is now understood that the digestion of food is essentially its combustion, and that the amount of heat evolved by the complete combustion is an index to its nutritive value.

In the ease and completeness of the absorption by the blood and general assistants vegetable foods show a much less loss of their food elements than do meats and eggs. In all instances they exceed meat greatly in ease of handling. For instance, in white bread there is four per cent waste, while in whole wheat there is five per cent loss. These statements are based upon the laboratory experiments of some of our state universities.

The next most important question is the daily amount of foods that should be taken. Professor Crittendon and Horace Fletcher have fully demonstrated that mankind does not need the amount of food that was formerly stated as the minimum.

This seems to be the era of the food crank. He expounds his doctrine to his friends and acquaintances. He lectures when he can get a platform and an audience. He writes earnestly and dogmatically when he can induce a magazine or a newspaper to publish his productions.

One of them says: "Eat no meat; man is above the dog, and the tiger." Another proves that cooking is an invention not in harmony with nature; only raw foods should be eaten. There is also the ardent advocate of a diet composed wholly of nuts. Then there is the cadaverous apostle of the fast; he regards appetite as a vice to be disciplined and regulated by rules. If all of them are right, there is nothing for mankind to do but lie down and die.

A Yale professor has had the rare good sense to take up this subject and experiment with it, not as a scientist might be expected to do, but as any clear-headed man not weighed down by book learning, would go about it. Nine healthy, normal Yale students were used in the tests, one of which continued for ten weeks after the rest of a vacation, and the other for ten weeks after a period of hard college work. The subjects of the experiment were requested to eat whatever their appetites called for, and as much as was required to satisfy them. The only order given was that they should thoroughly masticate the food and realize the taste of it to the utmost.

The results were surprising. At the end of each experiment it was found that the men had greatly decreased the quantity of food they wanted. Tests made before and after each experiment showed that their powers of physical endurance had increased from fifteen to more than one hundred per cent in spite of the fact that they had not taken any special physical exercise. They had improved, also, in physical strength and mental quickness. They were better men in every way than when they started.

The great Scotch writer once said, in answer to the question how we should eat, "Chew your food thoroughly, eat slowly, eat as little as you can and be comfortable; have a fair breakfast, moderate dinner and a very light supper."

There has been much discussion in regard to the best preparation of the different classes of food, also the varieties of food that should be taken together. Much

criticism has been lavished upon the modern methods of cooking. In many instances this is just. Whether to discard all methods of cooking and insist on taking entirely raw food as it comes from nature is still a question for discussion.

Some articles of food may be taken without any special preparation or cooking with as much benefit as if they were prepared by the most skillful cook of today. Other articles which need to be stored away for future use, must be carefully prepared for this condition, and when they are taken as food they should be in as near a natural condition as possible.

Modern cooking consists in applying heat and water and making up various mixtures in which the food value of the ingredients is often destroyed, and not infrequently the mixture is positively harmful. The securing of food is the chief business of the people of the earth. If all food be taken as nature intended, it will produce a natural healthy being. The elements that make up food should be changed as little as possible, as the supreme intelligence has prepared them as perfect as they can be.

Much of our food has always been taken without cooking, such as milk, cream, nuts, figs, grapes, pears, apples, raisins, dates, melons, cucumbers, olives, celery and olive oil. No one questions the advisability of doing this. It has been argued that all animals below man take their food raw, and enjoy better health. They have a digestive system adapted to this raw food, and are prepared to handle the kinds of food they need. For ages more than one-half of the staple articles of food have been cooked. We do not question that humanity could exist upon raw foods. The question now is whether mankind, whose digestive apparatus is adapted to cooked foods mainly could readily take altogether raw foods and be better than they would be with cooked foods. As this question has never been thoroughly worked out, it would be impossible to state at the present time what the use of raw foods would do. As palatability plays a great part in the taking of food, and as the present generation is accustomed to certain articles being cooked, such as meats, potatoes, vegetables and cereals, and as no one has demonstrated that proper cooking in any way seriously damages foods, it would look to be wisdom to continue cooking.

Because much of the cooking of modern times is absolutely injurious, destroying, to a great extent, the food elements and producing a harmful mixture, many writers and thinkers would swing back to raw foods only. It is the proper use, and not the abuse, of cooking that I am contending for. Because water drowns people is no reason why it should not be properly used for the benefit it will give us.

The following quotation is of value on this point: "In general I would say that all those foods which can be eaten uncooked and are palatable in that form, should be so eaten. There is little doubt that they are more valuable in their natural state than when cooked. Among these are nuts, fruits and some vegetables, together with milk and honey. However, there are some foods upon which man can subsist which, in their raw state, are not suited to the human stomach. Naturally these are better cooked, in which condition they are not only actually more palatable, but are capable of being more readily acted upon by the digestive juices of the stomach. Among these are beans, potatoes and other vegetables. To these might be added fish, fowl and flesh, if you are still carnivorous. Briefly, the natural palatability of a food, either its cooked or uncooked state, and your ability to enjoy it, should afford you ample guidance in this respect. No one is in a position to dogmatize on the diet question; even the cooking of cereals is a disputed point. Roasting of many foods is far more advisable than boiling, and steaming is fairly satisfactory. It would pay every one to study the subject of diet thoroughly, and decide each incidental question for himself."

612-614 Citizens' Building.

[Written for the MEDICAL BRIEF.]

Typhoid Fever, Etiology, Prevention, Treatment.

BY D. W. REED, M. D.,
Greeley, Colo.

The great physician said: "The poor you have with you always," and the same might be said of typhoid fever today, for it is sure to develop wherever people collect in large numbers, either in cities or camps, unless great care is exercised to dispose of all human and other animal impurities.

One of the direct causes of the disease is the *bacillus typhosus*, but the bacillus *coli commune* also has the power to produce the disease when it enters the alimentary canal in sufficient numbers. The germs enter the alimentary canal with the food or drink. They may enter the food and drink in several ways. First, water-sheds are polluted by animals, barnyards, etc. Second, sewers carry impurities into rivers, which serve as sources of water supply for cities lower down on the same streams. Third, boys often bathe in reservoirs outside the city limits. Fourth, in rural districts where no sewers exist, the surface closets are exposed to large swarms of flies, which carry the filth on their feet into the houses, where they light upon exposed articles of food; sometimes at the moment when it is being conveyed to the mouths of the people. This, I believe, is not a small factor in the causation of the disease in country districts.

The predisposing causes are various evil habits which break down the natural defenses of the body. Among these may be mentioned the habit of taking large quantities of liquids, especially cold liquids at meals. Nature seems to have anticipated the fact that the causes of diseases would be conveyed through the food and drink, and placed an efficient guard at the very beginning of the alimentary canal in the acid of the gastric juice. This acid in the normal stomach, and undiluted, is capable of destroying all ordinary pathogenic germs, even the Asiatic cholera vibrio. But, when the gastric juice is diluted with a large quantity of ice-cold water or other ice-cold liquid, the germicidal power is very greatly impaired, if not wholly destroyed. The use of tobacco and alcoholic beverages also predisposes to typhoid fever, as they produce a catarrhal condition of the gastric mucosa, thus greatly interfering with the natural germicidal action of the acid.

Prevention.—Having mentioned some of the causes, the first indication in the prevention of the disease is to avoid the causes. If we could secure a plentiful supply of pure water, and some satisfactory method of disposing of all kinds of excreta, the two chief factors in the causation of the disease would be disposed of.

Experience has proven that it is practically impossible to guard water-sheds closely enough to prevent pollution of the water. New York City is still attempting to accomplish this result in this manner. She will utterly fail. Some European cities have conveyed the sewage to farms where it fertilizes the soil and partly pays the expenses involved by the products from the soil. This method has given fair results, but not so good as the filtering plants which have been adopted by many cities. For rural districts the people should be taught to observe general hygienic regulations. An ancient rule required individuals to carry a paddle in the belt or girdle, with which they must bury excreta in the earth at a safe distance from a human habitation. This rule could be modified to meet the necessities of the twentieth century in rural districts by having a large sheet-iron pan under each seat in the closet, and a box or pail of dry earth, lime or ashes in the closet. With a shovel or tin cup the impurities could be thoroughly covered, and periodically removed and buried at a safe distance.

Barnyards should be so located that the impurities would not percolate through the soil and pollute the water in the well. This method would do away with a very prominent factor in the causation of the disease in the country.

Finally, every physician should be a philanthropist, and, by voice and pen, be a true teacher of hygiene. He should utilize the public press to publish articles which would educate the public upon this all-important subject. In no other

way will typhoid fever ever be stamped out.

Treatment.—The chief indications are to disinfect the alimentary canal and keep the temperature under control.

The first is accomplished both by drugs and diet. I prefer to clear the *prima via* by a saline cathartic in order that all debris may be removed. I follow this with five-grain doses of sulpho-carbolates of soda, lime and zinc, in such proportions as the individual cases require. The diet is *not sweet milk*, as is usually the case. As this is a departure from the almost universal custom, I will give my reasons for my position on the subject of diet: First, sweet milk is not a liquid food, but becomes a solid—sometimes a very tough, leathery solid—very soon after it reaches the stomach, hence it would be subject to all the objections of other solid foods. Second, sweet milk is an excellent medium in which to develop the typhoid fever bacillus, and as we do not wish to develop the typhoid fever bacillus, it is not wise to allow the patient to take sweet milk into his alimentary canal, since that would make an excellent culture tube for the growth of the "bugs." We must select a diet that will nourish the patient but discourage the growth of the germs. We find these requisites admirably fulfilled in fruit juices and fruit soups. Grape juice is especially adapted to both these ends.

The germs do not thrive in an acid medium, hence buttermilk might be used cautiously.

I *never give drug antipyretics.* I am confident that they do far more harm than good. They may lower the temperature, but they lower the blood-pressure also, and prevent the emunctories, the natural sewers of the body, from carrying the poisons out of the body as they should do. My chief antipyretic is hydrotherapy. On my first visit I pull off my coat and show the nurse how to give a sponge bath properly. Then I show her (or him) how to apply a compress to the trunk. This compress should consist of three or four thicknesses of cheese-cloth, and should cover the trunk from neck to thighs, and be covered with one or two thicknesses of flannel. A cold compress should be kept to the head also, and both changed as often as they get warm. They should not be wet enough to drip or wet the bedding. During the latter part of the night and early morning, when the temperature remits, the patient should not be disturbed, but allowed to sleep. In regard to the "tubbing," at a temperature of 70° F., for fifteen or twenty minutes, or until the patient is blue and teeth chattering, I will say that I am decidedly opposed to it. *There is a better way.*

When the temperature remains high in spite of the above treatment, place the patient in a full bath at a temperature but a few degrees below that of the patient. Allow a stream of cold water to enter the tub, while the patient is rubbed vigorously until the desired temperature is reached (70° or 80° F.). When the patient has been in this bath fifteen or twenty minutes, put him to bed, and allow him to sleep, with compresses to trunk and head.

Do not give whisky, but an abundance of wholesome, nourishing ice-cold grape juice.

In my worst cases I have placed the patient in a cold, wet sheet pack on a cot covered with a mattress, and a mackintosh, or rubber blanket. The patient enveloped in the wet sheet may be covered with a light woolen blanket, and at short intervals the blanket may be removed and the patient sprinkled with cold water without removing the sheet, and the blanket replaced. The head of the cot may be elevated an inch or two, and the excess of water caught in a pail or pan at the foot. After a little experience, the patient will scarcely awaken sufficiently to remark: "How good that cold spray feels!" and resume his sleep again. But the beauty of this method of treatment and diet is that the temperature will seldom rise above 102.5° F., and will be normal in from eight to fifteen days, while, according to other methods, he will be in bed from three to six weeks.

I have used the above method during the last ten years with great satisfaction to myself and my patients, and have never used alcohol (internally), nor coal-tar antipyretics, and during all that time I have not lost one patient from typhoid fever. If it appeals to you, try it.

[Written for the MEDICAL BRIEF.]

Pneumonia and Its Different Methods of Treatment.

BY C. R. KING, M. D.,

Atlanta, Ga.

In confirmation of Dr. A. W. Riley's article (June, 1907,) on pneumonia and its different methods of treatment, and his experience with the virtue of quinine as a (or *the*) remedy in pneumonia, I will give your many readers a history of two cases in 1862, while acting as assistant surgeon in the cavalry service in the Confederate Army: One morning we had orders to march to another point. It was winter, was not cold at 12 M., and the boys worked very fast in loading up the wagons, and got very warm; in a short time a brisk norther blew up, chilling everything. Two of the men were stricken at once with *congestion of the lungs* (as some hair-splitting diagnosticians want to term it), which is nothing but pneumonia in its first (or congestive) stage. They came to me, white as sheets, almost cadaveric in features; not with fear, for they were not that sort; they could scarcely get their breath because of pain in the chest. I had no medicine except a few bottles of quinine.

My father had often told me (he being a physician) before the war that herculean doses of quinine would abort pneumonia. I sat on my horse and gave each man three doses of quinine—tablespoonful dose each, near as I could guess, and told them to go to the farmhouse nearby and go to bed, and take one dose every three hours, and on the third day they rejoined the command, saying to me: "Doctor, you cured us in one night—we came near splitting our heads open with the big doses of quinine, but it cured us in one night."

I would not now like to give three such doses in a few hours, as I did then, for I can get same results with smaller doses in same time.

I wrap my patients with cotton batting, after applying a good coat of two or three drachms of quinine, one ounce of mustard, and warm lard to mix to a thin paste. Cover cotton with bandage, and sew it on. I never use ice or mush poultice on my pneumonia patients. Nothing but the above, and that after giving a hot Epsom salts bath, or rub all over the surface of body and limbs. Never remove the cotton batting until patient is well. Then strip off a little of the cotton at a time, to prevent taking cold.

I give internally:

℞	Quinine	3	grains.
	Soda Salycil	2	grains.
	Piperine	1	grain.
	Strychnine Nit.	1/80	grain.

M. Sig: One capsule every two hours.

In connection with above, give:

℞	Fl. Ext. Lobelia	1	drop.
	Fl. Ext. Gelsemium	5	drops.
	Fl. Ext. Aconite	1	drop.
	Fl. Ext. Serpentaria	2	drops.
	Fl. Ext. Asclepias	8	drops.
	Fl. Ext. Belladonna	½	drop.
	Fl. Ext. Digitalis	½	drop.
	Ergotole	5	drops.
	Syr. Wild Cherry	½	drachm.
	Simp. Syrup, q. s.	1	ounce.

M. Sig: Given at same time or alternately. After each dose compel patient to drink a glass of water.

Also give freely about half-drachm each of bicarbonate potass. and bicarbonate soda, three times a day, in glass of water. Put patient in bed in warm room, where there is a kettle on the stove boiling oxygen into the air, from fresh water, changed often to furnish proper amount of oxygen, so doors will not have to be opened to provide fresh air, as such process would be deleterious, as I have seen the fresh, cold air act badly, especially in the army, in a few hours. Common sense, good judgment and truth from experience beats all unreasonable theories.

With above treatment my patients seldom need the third visit—often up the next day.

824 Austell Building.

[Written for the MEDICAL BRIEF.]

Uric Acid in the Blood.

BY E. M. GRIFFIN, M. D.,

Farmington, N. C.

Does the accumulation of uric acid in the blood cause it to be both thick and *black?* If not, what is the cause, and treatment?

[We hope our readers will reply, through the BRIEF, to this query, and detail this condition.—Ed.]

[Written for the MEDICAL BRIEF.]

Intravenous Therapy.

BY WM. F. BERNART, M. D.,
Chicago, Ill.

Drugs, as a rule, are administered in one of four ways, either by mouth, by inunction, by injection into the cellular or muscular tissues and by intravenous injections; the first two have been used from time immemorial, the third since modern times, and the fourth is practically of a recent venture. It is too frequently stated that because results can usually be obtained under the first two methods, that the latter two should be reserved for exceptional cases. It is often difficult to say when these unusual cases will arise, therefore every physician ought to be prepared and capable of resorting to the latter methods without a moment's hesitation.

The technique[1] of giving intravenous injections has been thoroughly handled by various authors, so I will confine my remarks to its therapy and results. Before going further into this subject, I wish to state that intravenous therapy, although of recent birth so far as its practical applicability is concerned, can by no means be considered as being still in its infancy, for the great amount of work done by the men who have adopted this method conclusively shows that it is well launched upon what promises for it a brilliant future. It is a method for the general practitioner as well as the specialist, for if the former will master its use he will have fewer cases requiring the assistance of the latter.

In severe cases of anemia from neurasthenia and other causes, Franck[2] demonstrated the value of intravenous injections of iron. In his series of cases, the beneficial results were not of a transient character, and the advantages gained by a course of this medication were not readily lost. For those cases which fail to assimilate the iron, when given by mouth or those in which the ferruginous preparations derange the stomach or produce diarrhea, the intravenous method can be considered as bordering on the ideal. Results under this form of medication can frequently be obtained at home and the patient need not suffer the financial hardships that are often imposed by a trip to the seashore, mountains, etc., at a time when he can least afford the expense.

In that prevalent disease, syphilis, how many thousands of afflicted people seek relief at some resort known because of possessing certain so-called special merits! These luetics are compelled, at a big expense, to frequent these places because the medicine given them at home had not been absorbed, and, therefore, had not found its way into the circulation.. There is probably no active syphilitic lesion but what will succumb to treatment, providing the treatment is accurately directed and unhampered by uncertainty. During the years in which I have used intravenous mercurial medication, I have been given every reason to believe that malignant syphilis is more or less of a misnomer. This method has never failed me in the production of desired results, and these results, as shown by a series of experiments[3], were accomplished in three-fourths the time required by intramuscular injections, less than one-half of the time taken by inunctions, and about one-fifth of the time required under oral administration. Similar results in the same specified time can be gained by any one at any place; special virtues and adjuvants are not necessary. Injurious complications in the wake of intravenous sublimate injections can be considered in the light of being a myth, for so far, a period of over fifteen years, during which thousands of injections have been given, no permanent harmful effects have ever been recorded. In a recent publication[4], I considered the so-called complications following the intravenous injections of mercury—reference is made to this to save the space a repetition would require. Iodine can also be given to advantage intravenously; this is apparent when an immediate saturation is essential, as in paralysis, when the drug is not tolerated by the stomach, or when unconsciousness prohibits oral administration. The intravenous administration of anti-syphilitic drugs is applicable to and of advantage in any stage or lesion of active syphilis. In syphilis of the nervous system, it

should entirely displace the slower and less uncertain methods.

Rheumatism is another disease which so rapidly and surely dissipates the time of the patient, and the salicylate preparations are the ones which so persistently derange the digestive functions. Mendel, the author of intravenous salicylate medication, speaks of it as being a specific for all recent rheumatic affections, and that it will often produce results after the ordinary internal and external salicylic medication failed. It reduces most promptly the exudate in the diseased joints. The advantage of this method of giving the salicylates can be plainly seen; it rarely requires over one injection a day, and does not produce a loss of appetite, sweating and ringing in the ears. Compare this to an energetic oral medication, where the patient must be given his medicine every few hours, both day and night, and where the treatment soon produces a deranged stomach, sweating, etc. A point of no little importance is, that in obscure cases a differential diagnosis can readily be made, as non-rheumatic disorders are not amenable to this plan of treatment.

Recently I tried the sodium salicylate intravenously as an abortifacient to a beginning attack of rheumatism, with the result that one five-grain injection eradicated all the symptoms. This case had previously gone through two very severe attacks of acute articular rheumatism, and felt that he was capable of judging the beginning of another attack. At the time the abortive injection was given, his right shoulder was involved to such an extent that it was nearly impossible for him to move the arm, the slightest motion causing excruciating pain. There was a moderate rise of temperature, and a beginning swelling around the joint. Within thirty-six hours after the injection all the symptoms had apparently disappeared. The attack so far has not recurred. Under this form of treatment, even after an attack has become thoroughly established, it rarely requires over eight or ten injections to bring about a cure.

The intravenous use of antiseptics has been given an extensive trial, with the production of some exceptionally good results. A preparation of soluble metallic silver has probably been the one most experimented with, and there is abundant literature to show its efficacy; it has, however, certain drawbacks which can not be readily overcome, these are the occasional production of severe chills and rise of temperature when this drug is used intravenously. Reports upon intravenous sublimate injections, so far as efficacy is concerned, are equal to those of silver, and, besides, the use of this salt is not followed by severe sequelæ; in fact, it has a marked antithermic action.

Antiseptics practical for intravenous use are indicated in severe cases of puerperal infection, septicemia, erysipelas, scarlet fever, typhoid fever, pneumonia, hemorrhagic diatheses, when due to bacterial origin, septic endocarditis, etc., but to be of value this treatment must be instituted before the patient's last chance for life has vanished. Mercuric chloride, especially, must be given in the largest doses possible, and frequently enough to keep up an intensive action. This method applied to this class of work is exceptionally fascinating, even though the exact alexiteric action of the drug used is not positively known. As the list of antiseptic drugs for intravenous use increases, it most likely will be possible to effect far better results than those obtained up to the present. Before leaving this part of the subject, I wish to state that this method is deserving of a trial in all refractory cases of the above-mentioned diseases.

Arsenic indicated in tuberculosis, diabetes, chronic skin diseases, chorea, neurasthenia, anemia, chlorosis, paludism, splenic leucocythemia, exophthalmic goitre, cancer (for its palliative action), Hodgkin's disease, etc., is another valuable drug that can be used intravenously. Occasionally the usual methods of administering this drug do not produce the desired results; it is in these cases that the intravenous route should be given a trial; then, if results are not obtained, it is useless to continue the arsenical treatment.

Intravenous injections have always been spoken of as a measure of last resort. In justice to this method of administering drugs I would suggest the displacement of this phrase by stating that

it is at present the highest therapeutical method. The former phrase is, in a certain sense, misleading, for it gives the impression that even if it does no good it probably will do no harm. This interpretation, which so many medical men have taken, is entirely erroneous, so the sooner it is eradicated the quicker will the intravenous method of administering medicines receive its just acknowledgment.

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42 Madison Street.

[Written for the MEDICAL BRIEF.]

Incipient Tuberculosis.

BY M. B. TULLER, M. D.,

Gibbs, Ky.

The importance of this subject is such that it requires the closest study by, and frequent discussion on the part of those who are interested in its suppression, though one almost palls with the reading on the subject, especially as the results of treatment are too doleful and monotonous to be encouraging. Nevertheless, it is our duty to persevere in our investigations and studies, trusting to the Giver of all good to reward our diligence with the means with which to stay the ravages of this plague.

In my opinion, tuberculosis is a disease of perverted or malnutrition, the predisposition to which may be either hereditary or acquired. While it does not necessarily follow that because a patient's parents or grandparents have died of tuberculosis that he will do so, it does follow that whatever weakens his powers of resistance will tend toward the development of tuberculosis in some form, either by infection or infiltration, as the case may be.

The writer knew one family of nine men and women whose mother died of tubercular consumption in her climacteric, every one of whom died of senile consumption upwards of seventy years of age, the third generation, upwards of fifty in number, dying of tubercular phthisis, between the ages of twenty and fifty. The following points, if any thing, may be inferred from this case:

1. That these people inherited the predisposition from the maternal family.

2. That by virtue of extraordinary vigor they resisted the encroachments of the disease until vitality was impaired by weight of years, when they succumbed to what was most natural to them.

3. That the progeny of these people, having a different environment, were not endowed with the same vigor of resistance and yielded to the invasion from early to middle life.

Those having an hereditary predisposition present one of two physical appearances:

1. They are tall, thin, rawboned, narrow and flat-chested, slim waists and stoop shouldered. They have thin skin, pale or slightly flushed complexion, or a complexion that flushes easily. The muscles appear long, slim, and are soft, never hard or firm, no matter what their employment may be. The hands and fingers are, likewise, long and slim. The hair is fine, silky, and the eyes are large, with an unnatural luster.

2. They may have broad shoulders and chests, but the chests are flat, and the subjects are disposed to take on adipose, even to excess, which, however, is never firm, but always soft and flabby. Every little illness causes rapid loss of flesh, which may be quickly restored after recovery, but never becomes firm. They have frequent "colds," often take them from very slight exposures, and are always liable to swollen glands, especially tonsils and lymphatics. Every scratch or cut of the skin may ulcerate or suppurate. The complexion may be florid, or dingy, unclean in appearance.

These are the two forms of hereditary tubercular predisposition, and are the types of cases taken from practice.

Both forms are prone to frequent gastro-intestinal disturbances, either simple

(atonic) or catarrhal indigestion, more frequently the latter. Certainly four-fifths of my pulmonary tuberculosis cases have been preceded for a greater or less period of time by an obstinate, frequently recurring, incurable passive gastritis. Indeed, this symptom has become almost pathognomonic to me, especially when the patient complains that every little cold he takes "seems to go to his stomach," or is accompanied by gastro-intestinal indigestion.

One of my cases, of the first described type, began his downward course with a violent attack of gastritis, from which he recovered, but was subject to frequent "bilious" attacks of greater or less severity for six years, when he developed tuberculosis, dying in about eight months after inception.

The presumption is that the impaired digestive function weakens powers of resistance, until the subject at least falls an easy prey to the infection. That the disease is communicable to those having such family predisposition has been apparently verified by my experience therewith.

The first symptom indicating a probable onset is persistent tachycardia.

The patient may, possibly, complain of nothing but a little weariness, but persistent increased pulse rate should, in proper cases, excite the suspicion of the physician what to expect.

The second symptom may be enlarged lymphatics. This is not a very frequent symptom, but may occur in connection with the more rapid pulse.

The third symptom may be noted by the patient as a shortness of breath upon moving more rapidly than usual, or upon ascending an elevation. The physician will find that respiration has increased by eight or ten to the minute. Auscultation now will possibly reveal nothing more than an inertia of the lung cells. There may be a slight indefinable roughness, but the cells do not fill well, the patient complaining that it requires too much exertion to breathe. The fourth symptom is the cough, a short hack, frequently repeated, or a hard, racking dry cough. The former is apt to be the beginning of chronic pulmonary tuberculosis, while the latter belongs to the more acute form, except when the larynx is the seat of the onset, when the cough may resemble, somewhat, that of croup.

The fifth symptom is more or less rapid loss of flesh, and continuous sense of lassitude. Prior to this time there may be no appreciable rise of temperature, not to exceed one-half to one degree in the evening. Now will begin a febrile action, remittent or even intermittent in character. In one case the temperature was subnormal every morning for several weeks, rising in the evening to 101° and 101.5° F. Percussion will now reveal dullness in the apices of the lungs, and auscultation will show prolonged expiration.

Continued hoarseness or huskiness of the voice may be the beginning symptom of tuberculosis pulmonalis. The pulse in such cases may not be accelerated until the apices of the lungs have been invaded. In one of my cases the hoarseness was a constant symptom for more than two years before there appeared any tachycardia, the patient dying three years later of chronic tuberculosis.

One case, age sixty-three, began with partial paralysis of hands and arms, and difficult locomotion and accelerated pulse, several months before the cough developed. She lived one year after the cough began. All of her family, with a possible single exception, died of some form of tuberculosis. All cases of ischiorectal abscess in persons of tubercular habit, or those subject to gastric catarrh or indigestion, should be regarded with suspicion, and the patient put upon such regimen and treatment as will support the vital powers. To this rule there may be two exceptions, viz., first, those which have developed from an attack of dysentery, and, second, those resulting from a contusion. Of this, however, I am not altogether sure, much depending upon the hereditary tendency of the patient.

Frequently recurring pleuritic stitches, with increased pulse rate, almost invariably indicate the development of tuberculosis.

Recurring attacks of colic, with loss of flesh and tachycardia, indicate a probable tubercular development. In one of my cases, a girl, seventeen years of age, several attacks occurred, with increasing severity, until in the last attack she ever had she took two grains of morphia sulph.

in less than two hours before the pain began to subside. She died sixteen months later of pulmonary consumption.

A second case, a young married woman, had repeated attacks of colic, and I warned her husband and parents that probably tubercular consumption was impending. This verdict displeased them and they sought other advice, which was not in accordance with my opinion. She died three months later of acute tuberculosis. Recurring attacks of colic, with loss of flesh and tachycardia, may be regarded with grave suspicion.

Suppressed or steadily failing menses should always be closely investigated. If accompanied by failing flesh, weariness, and increased pulse rate, tubercular invasion may be apprehended.

Prognosis.—Can incipient tuberculosis pulmonalis be cured? In the sense of deferring the disease an indefinite period, it is curable, but the prognosis should be both qualified and guarded.

In patients under fifteen years of age the prognosis is quite hopeful, except in the case of infants born of mothers well advanced in the second stage. Such children, in my practice, have all died in a few months. Between the ages of fifteen and thirty-five the prognosis is, as a rule, unfavorable. Between thirty-five and sixty, except in the case of women during the climacteric period, the prognosis, all things being equal, is fairly favorable. If, however, there be a luetic or alcoholic history, the prognosis is unfavorable. If the pulse becomes normal in frequency the patient will continue in good health until there is a recrudescence, some time in the future. If all the symptoms disappear, except the pulse rate, which continues at ninety or over, the case will be speedily fatal.

One of my cases, a young man, twenty-two years of age, apparently made a perfect recovery. Temperature and respiration became normal, cough disappeared, flesh was more than ever before in life, and strength, apparently, as good, but tachycardia remained. He asked me in August if he could not go to work sawing logs about the first of September. I advised him not to do so, as he could not afford to spend his strength at hard labor, with the winter ahead of him. He did not heed my advice and died the following December, having worked but three weeks in September in the forest.

The peculiar mental state of these patients makes it well-nigh impossible to impress them with the gravity of their cases, especially in the very early stage. If they are told plainly that they are in peril, they become angry and seek other advice, and, possibly, are deceived by the second adviser; and if he prescribe honestly, will neglect his treatment, because he has told them there is nothing serious ailing them. They will then seek the nostrums, and in a few months pass away.

Treatment.—"An ounce of prevention is worth a pound of cure." My advice to all people having a tubercular habit may be summed up in three words: Go to farming. Avoid the professions, the trades, the offices, the stores, warehouses, railroads; seek the soil and the air in a moderate, non-malarial climate, and, in my judgment, tuberculosis will soon begin to subside. True, farmers do die of tuberculosis, but my experience has been that a far smaller percentage of them die of that disease, and, other things being equal, it is more easily curable when contracted by them. Furthermore, a large proportion of the cases coming to my notice among farmers have been in advanced life, thus giving them a chance to do their measure of usefulness before leaving this world. In the mountains of this State and Virginia, so far as my observation goes, less than one per cent of deaths among the farming population occur from pulmonary tuberculosis. Changing climate, or rather getting away from the location where the disease was contracted, in incipient cases, has helped some of my cases to a much longer lease of life than they would probably have had.

But if they have recovered and persist in returning to their old home, a speedy recurrence and early death may be looked for.

Feeding should be milk, eggs, butter in large quantities, and raw beef, if the patient can be brought to eat it, and often predigested milk foods in quantities. Some cases under my observation have learned to eat raw, chopped, salted beef, to the extent of a pound daily, with evident benefit. In the beginning, the patient

should be encouraged to do light work, which will not tax his strength, preferably such as will keep him on horseback.

So far as internal medication is concerned, the three great remedies for incipient tuberculosis, in my experience, are salol and sulphur combined, calcium and bryonia alba.

The first of these prescriptions is antiseptic, antipyretic and alterative, and is more or less useful in all cases, even in conjunction with other treatment. I give it in nearly all cases, as a routine habit, until such time as I think it will accomplish no more. So far as the phenol enters into its composition, it is a modification of the creasote treatment. Its indications are so numerous that it can scarcely fail to be useful. Five grains of each, three times daily, will suit most cases, but if it appear desirable to increase the antiseptic dosage, five grains of sulph. and ten grains of salol may be safely and successfully given.

Calcium sulphide—systemic antiseptic—specifically indicated in those cases where the cough is alternately dry, hard and loose, and where the gastric condition craves mild acids. It may be given hourly until nausea is manifest, then less frequently, and often does excellent service.

Last, but not least, bryonia alba is specially indicated by three sets of symptoms:

1. By a more or less constant short, hacking cough, accompanied by frequent pleuritic stitches, which are especially aggravated on moving about.

2. By a hard, dry cough, accompanied by soreness of the chest walls, especially while coughing.

3. By a hard, dry, racking cough, which compels the patient to sit up in bed, and support the chest with the hands.

All the cases presenting either of these symptoms have been cured of the particular attack for which the drug was prescribed.

Calomel is a good second remedy, and is especially indicated in those cases having either a hard, racking, dry cough, or a short, hacking cough, with a furred or slimy tongue, and tenderness on deep pressure in the stomach. Calomel, one-tenth grain every two or three hours, will be very helpful in such cases, and materially assist them toward recovery. If the cough is hard and dry, without any of the symptoms indicating any of the above remedies, one sixty-seventh to one thirty-third grain of apomorphine, hourly, will be of great benefit, so far as that particular symptom is concerned, but having no especial systemic power will contribute nothing toward the recovery of the patient, except to relieve the cough. Such cases will be constitutionally helped by the syrup hypophos. comp.

Nitric acid is indicated by the following symptoms, viz., constant, dry, barking cough, from dark until midnight, with almost total relief after that hour.

Twice have I helped patients when this symptom was present. The first, a young man, age twenty-four, was cured for nearly a year, when a recrudescence occurred, and he ran rapidly down, dying in a little more than three months. The second, a woman, age thirty, was cured, ten years elapsing before there came a recrudescence, which was cured by bryonia tincture. In a third case, a young man, age twenty-six, the nitric acid did nothing, the patient dying in three months, of acute tuberculosis. Drop doses, United States Pharmacopeia dilute, repeated, as the patient will bear it.

In the hemorrhagic form, belladonna has been the most useful drug, so far as that particular symptom is concerned, and will greatly help the patient in a general way. Specifically, it is indicated by blood which feels hot to the patient, as it comes up, and which clots speedily upon exposure to the air. The blood may be dark red, or bright and profuse, but the hot sensation and the rapid clotting are always present.

If the patient is excited, and the pulse tense, the hemorrhage bright and frothy, aconite will speedily control it. If the hemorrhage is dark, and the patient pale and weak, the phosphate of iron will be useful.

One young woman, age twenty-two, contracted the disease while nursing a dying brother, was given iron phosphate up to ten grains daily, and made an excellent recovery.

All of these cases, however, need the syr. hypophos. comp. in varying dosage, and, after the specific indications have

been controlled, I never fail to prescribe the comp. The only case of acute pulmonary tuberculosis that I have ever seen recover, was from the use of this remedy in teaspoonful doses every two to four hours, day and night, until she was out of immediate danger, when it was reduced to three times daily. The patient was a tubercular subject, age twenty-six, and at the onset bade fair to compete with Da Costa's thirteen-day case. She was put at once upon the syr. hypophos. comp. every two hours, day and night, and the first forty-eight hours was given one two-hundredth of a grain of phosphorus on the alternate two hours, to aid in maintaining strength, and to combat the hoarseness. At the end of that time I discontinued the drug, continuing the comp. alone. The first sign of improvement was noted on the third day of treatment, when the temperature fell from 104° to 103° F. The disease slowly and steadily declined, until at the end of four weeks she was able to sit up in her bed, and soon thereafter got up. She died two years later, of a recrudescence. .

In my opinion there are three great constitutional predisposing causes of disease, and they are tubercle, uric acid, and syphilis, and their combinations. A diligent study of these diatheses, and the means necessary to keep them in a condition of ability to resist germ invasion, or to throw off the toxins carried by them, will greatly relieve the world of its germiphobia, the main office of the microbe being, in my opinion, that of purveyor of toxins or virus. The sunshine may possibly destroy the activity of certain germs, particularly the bacillus tuberculosis, but it will never destroy the virus of advanced cases, as carried by the bacilli, even though the amount be infinitesimal. Hence, in all cases of tuberculosis I instruct the family to have the sputa burned, and the dejecta I order buried in the soil, not near a water course.

When this instruction is obeyed, I rarely have a case of infection resulting from my consumption cases.

I leave the discussion of the other stages of this disease to those whose experience may not have been as distressingly monotonous as mine. Suffice it to say, that I advise my patients that they need but little medicine, just sufficient to relieve whatever distressing condition that may arise, to take all the sunshine and good food that they can, and, particularly, not to take nostrums, which latter injunction they at once proceed to disobey.

[Written for the MEDICAL BRIEF.]

A Brief Resume of the Musculature and Fascia of the Pelvic Exit.

BY BYRON ROBINSON, B. S., M. D.,
Chicago, Ill.

I. MUSCLES OF THE PELVIC EXIT.

In the pelvic floor or pelvic exit there is compromised a series of muscles with similar position and function. The muscles of the pelvic exit may be divided into two groups, viz., (1) those of the pelvic floor; (2) those of the perineum. The musculature of the proximal series of muscles in the pelvic floor forms the funnel-shaped muscle plate and produces the diaphragma pelvis rectale. It is the chief muscular layer of the pelvic floor. It presents ventralward a slit for the genito-urinary organs (vagina and urethra) and dorsalward a slit for tractus intestinalis (the rectum). The musculature of the distal series of muscles are closely associated with the rectal and genital sphincters. In general observation of the muscles of the pelvic exit indicates that they are associated with the distal ends of the rectum and genito-urinary apparatus and also that they render common function to these apparatus. The following scheme will present the muscle groups of the pelvic exit:

Diaphragma Pelvis.	Diaphragma pelvis rectale. (Diaphragma pelvis proprium.) Diaphragma pelvis uro-genitale. (Diaphragma pelvis accessorium.)

Diaphragma pelvis rectale arises from the ventral and lateral pelvic wall of the lesser pelvis and becomes inserted into its opposite fellow in the median line. According to some writers each half of the diaphragma pelvis rectale is composed of four muscles (coccygeus, ischiococcygeus, pubo-coccygeus, pubo-rectalis). Others call the composite half the coccygeus and levator ani which is convenient from practical purposes.

Diaphragma pelvis uro-genitale is a trapezoid formed muscle plate located in the angulus pubicus. In women it ensheaths or surrounds two canals—vagina and urethra, which penetrate it. The urogenital diaphragm consists of three muscles, viz.: (1) *Musculus ischio-pubicus.* This muscle located in the subpubic angle may be present in limited quantity, but its tendons are present on both sides representing the ligament arcuatum pubis and ligamentum transversum pelvis. (2) *Musculus transversus perinei* profundus which arises from the rames pubis and ramus ischium, and passing dorsal to the vagina terminates in the cetrum tendineum. (3) *Musculus urethro-vaginalis* which arises from the membrana intercruralis, ligamentum transversum pelvis and from the walls of the plexus pubicus impar. The pelvic floor muscles serves two purposes, viz.: (1) Aid to support the pelvic viscera. (2) They act as sphincters to the distal end of the tractus intestinalis (diaphragma pelvis rectale) also as sphincter to the distal ends of the tractus genitalis and tractus urinarius (diaphragma pelvis, uro-genitale).

II. FASCIA OF THE PELVIC EXIT.

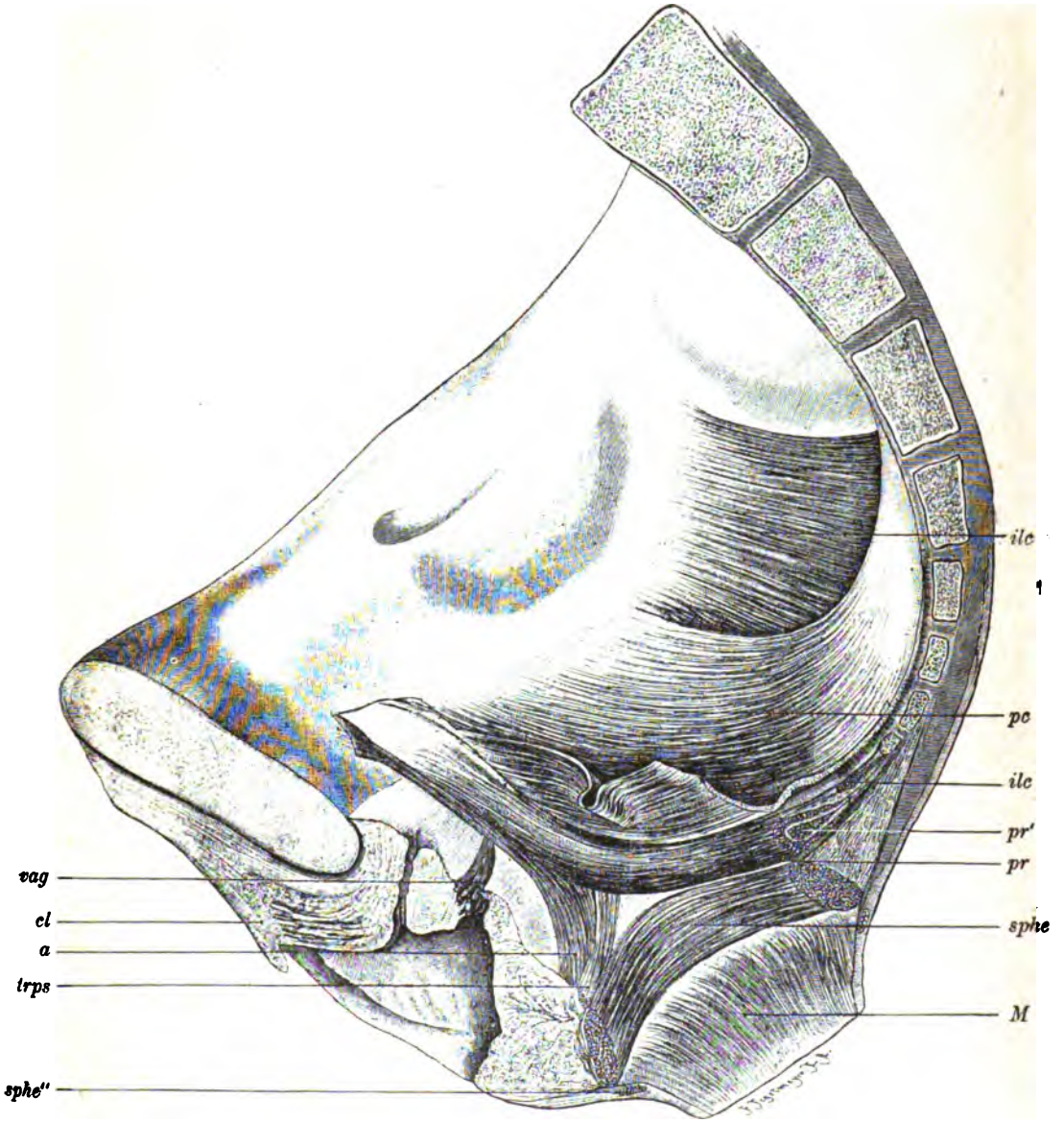
The fascia of the pelvic exit must be considered as belonging to the muscles which it ensheaths. In order and form the fascia compounds and belongs to the muscles. The pelvic fascia serves several purposes, viz.: It acts as a fixation apparatus for the pelvic viscera. (2) it forms the chief support for the pelvic viscera (the muscles aid in functionating the viscera and to a moderate extent in support). (3) The pelvic fascia maintains in ordered planes the muscles of the pelvic exit. Fascia may be a simple, fibrous, shiny, tendineous membrane or loose connective tissue. The development of fascia depends on its function on its environments. Professor Holl, of Gratz, Germany, divides the pelvic fascia into three classes, viz.: (1) fascia subcutaneous superficial; (2) fascia ensheathing muscle; (3) fascia pelvis internal (visceralis).

(1) *Fascia subcutanei superficialis* is located in the regioano-perinealis. It is a continuation of the gluteal fascia and lies between the skin and muscle fascia. It lies on the perineal body between the skin and muscles and adjacent to the anal region.

(2) *Musculus fascialis* ensheaths the muscle and maintains the muscles in functionating order. Each muscle (*e. g.*, obturator internus, levator ani, coccygeus) is ensheath from origin to insertion with a distinct fascia of one or more cleavable planes of fascia. Where adjacent muscles lie in contact the ensheathing muscular fascia may coalesce, blend and present intra-muscular fascial septa. The diaphragma pelvis (composed of the levator ani muscle and covered directly or the levator ani fascia proximal and distal) presents the most typical apparatus of a combination of fascia and muscle. The functions of the levator ani muscle are governed, controlled, by an ensheathing fascia and practically its utility depends on its fascial relations. The fascial relations also enhance strength for its contraction force can be localized for effective purposes by its extensive proximal and distal surface fascial relations, *e. g.*, it resembles the circulation of the tractus genitalis (intestinalis, urinarius, etc.) which can be concentrated by irritation gestating ovum, neoplasm enticing the chief blood stream to a definitive area, so by contraction of the levator ani and the arrangement of the proximal and distal fascia may be localized, concentrated in single localities as contraction of vagina, rectum, urethra. The diaphraghma pelvis (levator ani muscle with its proximal and distal fascia) is one of the most significant musculo-fascial apparatus known) the diaphragma thoracic a precisely similar apparatus. The levator ani fascia proximal and levator ani fascia distal has coalesced blended into two distinct fascial blades (proximal and distal) which emit numerous intermuscular fascial septa between the loose parallel levator ani bundles.

(3) *Internal pelvic fascia the fascia visceralis or pubo-sacralis.* This fascia consists of single or multiple cleavable planes of connective tissue which fix the pelvic viscera in order for functionation and support. The chief origin of the pelvic visceral fascia appears to be the arcus tendineus or white line.

We may view the pelvic visceral fascia, fixing the organs as projecting, cleaved planes of the levator ani fascia proximal. vis lining its wall an aponeurosis for its muscles. The pelvic fascia is attached firmly to the pelvic brim at its entrance



SAGITAL MEDIAN SECTION OF FEMALE PELVIS HARDENED.

FIG. 14. The preparation has been accomplished in the internal pelvis. It presents especially the course of the muscularis sphincter recti or musculus pubo-rectalis (ilc) and (ilc) a broad musculus coccygeus (pc), musculus pubo-coccygeus whose ventral segment is reflected in order to obse rve the musculus pubo-rectalis or sphincter recti, a, a bundle of the levator ani muscle (pubo-rectalis) coursing to the centrum tendineum as well as to the musculus sphincter ani externus and musculus transversus perinei superficialis (trps), transversus perinei superficialis. The musculus pubo rectalis (levator ani) consists of two layers, where by the one (pr) is groove formed. the other (pr') represents a thick bundle lying in the groove of (pr) (after Holl).

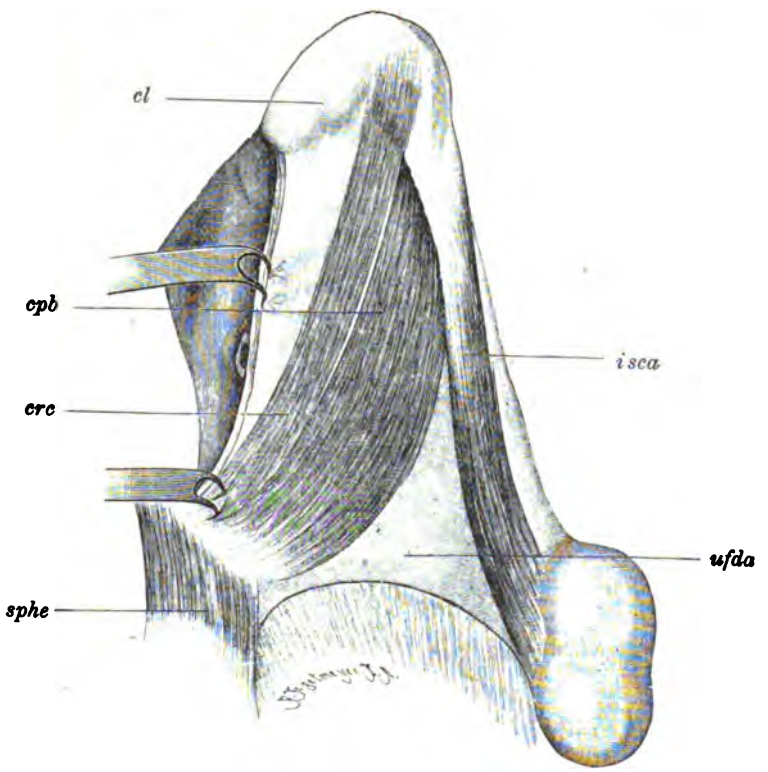
The pelvic fascia lines the internal pelvis from proximal entrance to distal exit it presents the cylindrical form of the pel- (*i. e.*, at the sacral promontory, ileopectineal line and dorsal surface of the pubis). It is attached at the pelvic exit to the

coccyx, major sacrosciatic ligament, tuber-ischii and to the base of the triangular ligament. This fibrous cylindrical membrane should be known as the *parietal pelvic fascia.* Individually it includes the fascia pyriformis, fascia obturator and fascia triangulare dorsalis. It becomes firmly inserted into the bones projecting into the pelvic exit, viz., ischial spine, symphysis pubis dorsalis, coccyx. The white line or arcus tendineus, a thickened band of fascia, extending from ischial spine to the dorsal surface of pubis practically represents the division between the pelvic cavity and iliorectal fossa. The white line presents two important factors, viz: (1) It is the origin of the levator ani muscle. (2) It serves as the origin of the significant levator ani fascia proximal (recto-vesical or visceral pelvic fascia) and levator ani fascia distal *this is the distal pelvic fascia.* The levator ani fascia proximal divisible in to many cleavable planes blends with the muscular walls of the rectum, vagina and bladder.

APPLICATION OF STRUCTURE AND FUNCTION TO METHODS OF TECHNIQUE.

Having examined the structure of the pelvis in detail (muscularis and fascia) me may now combine the anatomic factors which explain successful colpoperineorrhaphy. The first is the restoration of damaged fascia. A second important factor is deep suturing. A third element in a successful operation is the restoration of function by means of restored muscular relations. A fourth is the forcing in the median line of adjacent perineal tissue, and a fifth factor is the flap method of operation whereby there is no denudation or loss of tissue; and the flaps (skin and mucosa) avoid infection and insure primary healing. The flap method enables the operator to dissect to the lacerated structure or to reach the seat of the lesion, either by cleaving, splitting tissue or deep suturing with a handled needle with an eye in the end. Silk worm gut which is used in suturing, being nonseptic, may remain for weeks in position, like a splint, before removing. Among the fasicæ of importance are: The levator ani proximal and distal, the triangular ligament and deep layer of the superfiscial fascia, and the ischioperineal ligament. The operation of colpoperineorrhaphy is the result of evolutionary processes of failures and successes. In the beginning it was considered sufficient to unite the superficial or external tissues at the site of the lesion. This experiment soon demonstrated its own failure, and later it was deemed essential to restore the deranged and lacerated muscular elements in the pelvic floor. The attempt at successful colpoperineorrhaphy by reuniting external tissue at the site of the lesion, or restoring deranged or lacerated muscles to normal relations proved a failure to such a degree that it was evident that some other factor played a role; this factor was the *fascia.* The restoration of the lacerated tissue at the site of the wound, with the deranged and ruptured muscles, and the restoration of the deranged fascia are the three factors on which successful colpoperineorrhaphy rests. To Dr. T. A. Emmet must be given the credit of the view that the pelvic fascia played an important role in successful colpoperineorrhaphy. Experimental labors on the perineum, in a desultory manner, have been conducted for fifty years. But only lately have experimental and anatomic data been judiciously combined so as to render clear what are the useful methods in colpoperineorrhaphy. All successful surgical procedures demand an anatomic basis so that physiology may be restored. The deranged and lacerated parts in colpoperineorrhaphy must be restored in a manner simliar to that in operation for hernia. The successful surgical procedures in colpoperineorrhaphy have passed through the same evolutionary process as have the various operations for hernia. In hernia we must restore the anatomic relations, the obliquity of the inguinal canal, so that its valve-like action makes it impossible for the viscera to again protrude. In colpoperineorrhaphy, not only the anatomic parts should be restored, but the various canals and exits must also be restored to ensure permanent physiologic success. Deep suturing, so essential, is only groping after an anatomic base to restore the ground work. The same ideas are involved in the views of discerning surgeons who suggest that

if the sutures include sufficient of the rectovaginal septum, or if they are introduced deep sufficiently to make ventralward traction or if they include the sulcus on either side of the projecting vaginal wall, the operation will be successful. Dr. W. R. Wilson wrote a brief but comprehensive article on the subject, suggesting excellent principles, but modestly claiming that the anatomic basis is still imperfectly understood. In the subject of colpoperineorrhaphy the origin of the evitable lesion of the deep perineal fascia. This will destroy the tone of the dorsal vaginal wall because the fascia has been separated from the vaginal wall adjacent to its exit. If the distinct ischioperineal (ligament) fascia be torn, which is quite frequent in parturition, the pudendal end of the vagina falls dorsalward and begins its condition of rectocede; its fascial (and doubtless muscular) supports have been torn. With a torn levator ani fascia proximal the pelvic viscera will inevita-



MUSCLES OF THE CLITORIS BULBÆ VESTIBULÆ.

FIG. 15. (cl), clitoris; (cpb), musculus compressor bulbi proprius; (crc), musculus constrictor radicis clitoridis; (isca), musculus ischio-cavernosus; (sphe), musculus sphincter ani externus; (ufda) distal fascia of diaphragma uro-genitale (after Holl).

lesion demanding operation should be studied. The cause of the lesion, requiring repair, is almost always the result of the first parturition, more rarely other forces produce sacropubic hernia. The lesions of the perineum may arise from the ventral movement of the head lacerating the levator ani fascia proximal and distal with damage to the ischioperineal (ligament) fascia and tearing of the triangular ligament, with consequent inbly move distalward, for it is unphysiologic for a muscle to act as a continuous, tensionized support for viscera. But it must be remembered that the fascial layers of the pelvis are not only of value as visceral supports by separate and distinct connection in themselves, but they are of significant importance as serving a means of visceral support and for a point of attachment for muscles lying between their blades. The levator ani, which is

the most important muscular apparatus on the pelvic floor, serves by its fascial attachments as a visceral support to the rectal and vaginal walls as well as to the pelvic floor, for the uterus is supported practically by the intact pelvic floor.

The pelvic floor may be considered as composed of two widely superimposed, overlapping valves (D. Berry Hart). Whatever disturbs the relations of these valves tends toward -sacropubic hernia. The ventral pelvic valve is composed of the bladder, urethra, ventral vaginal wall and retropubic fat. The dorsal pelvic valve is composed of the vaginal wall, perineum and rectal wall. The pubic segment is attached to the symphysis pubis and composed of loose connective tissue. The retropubic fat is loose and spongy, the peritoneum may be easily stripped from the bladder and the bladder from the vagina. In labor, this segment becomes elevated and is the one which easily becomes deranged or acquires pathologic conditions, and especially is liable to prolapse or sacropubic hernia. The levator ani fascia proximal becomes torn from the walls of the bladder and vagina, allowing the intra-abdominal pressure to force the bladder and vagina distalward. When the uterus prolapses (sacropubic hernia) the ventral vagina wall appears at the pudendum first. The strong levator ani fascia has been torn from its walls and when the same fascia has been extensively torn from the bladder it prolapses also. In vesical prolapse the peritoneum with its many cleavable planes of subperitoneal (fascia) tissue becomes torn from the bladder. The sacral valve of the pelvic floor, consisting of the dorsal vaginal wall, the perineum and rectum is attached by strong fascial connections interwoven by muscles to the coccyx and sacrum. In parturition this segment is forced dorsalward and straightened extended. It becomes defective by laceration at the perineal body, the vagina loses its normal curve and sacropubic hernia is initiated, *i. e.*, retroversion begins, which is the inevitable factor in sacropubic hernia. The uterus itself has nothing to do with prolapse, it is inert. Intra-abdominal pressure and effective sacral and pubic segments account for prolapse; the sacral segment is fixed; the pubic segment is movable.

The functions required of the pelvic floor are to resist intro-abdominal pressure and to permit rectal and vesical functions. The structural anatomy of the pelvic floor must not only be studied in general as to its segments, valves, muscles and fascia, but each individual organ should be studied as regards its supports. The uterus has its individual supports, which though not separate from the fascia and muscles, should be well considered, for colpoperineorrhaphy may be required for (prolapse) sacropubic hernia without visible lacerations. The first elemental individual supports of the uterus are the uterorectal (sacral) ligaments. They consist of two folds of peritoneum embracing muscular and strong connective tissue extending from the dorsal surface of the cervix to the rectum (perhaps some fibers do extend to the sacral fascia). These ligaments are an extension of the muscular and connective tissue fibers of the promixal end of the vagina backward. As Dr. Frank Foster notes, the vagina and uterorectal ligaments form a balance beam on which the uterus rests. Yet it should be borne in mind that organs do not rest merely on bases, but are swung on supports or mesenteries. The brain, liver, heart and uterus are all suspended by supports and do not rest merely on other organs or bases. The uterorectal ligaments are powerful, peritoneal, muscular and connective bands which vigorously suspend the uterus by the neck which is blended in the pelvic floor. Careful dissections and vaginal hysterectomy will demonstrate that the uterus could not descend without the uterorectal ligaments became elongated. The uterus is supported by innumerable threads which extend from the pelvic wall to it. The so-called uterine ligaments are supports only in pathologic status. The uterus is said to be suspended by so-called ligaments (round, broad, sacro-uterine) fixed by intra-abdominal pressure; or supported by the pelvic floor.

(To be continued.)

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Syphilis.

BY J. DABNEY PALMER, M. A., M. D.,
Monticello, Florida.

Syphilis is a specific, contagious, chronic disease, communicable by inoculation, by contact of surfaces, by hereditary transmission, and, most commonly, by impure sexual connection. As early as 1380 John Gadisses gave ample proof of its contagious nature. About the year 1500 Benedict Victorius advanced the curious opinion that it was "epidemic, and originated from an unwholesome disposition of the air, and a spontaneous corruption of the humors, contracted by an error in diet, or the abuse of the nonnaturals." He wrote an elaborate essay going to prove that "the putrid humors are sufficient to produce it," and to put the matter beyond all doubt, he testified that he happened to know "some very worthy and religious nuns who were confined in the strictest manner, unfortunately contract the disease from the peculiar state of the air, together with that of the putrid humors and the weakness of their habit of body." This doctrine, though at the present day we smile at its absurdity, was really not only believed, but stoutly defended by physicians.

The question of the origin of syphilis has given rise to much fruitless discussion. It has existed ever since prostitution prevailed in the world; and this has been from the remotest antiquity and among all nations. Descriptions of it are found in the earliest writings, and traces of it are discovered in the bones of prehistoric people. Chinese accounts of it date back to the writings of Hoan Te, who lived about 2637 B. C. And the Japanese historians described it several thousand years ago. The Hebrews were familiar with it, and it is probable that many cases called leprosy were really syphilis. Hippocrates and his successors describe it as it existed among the ancient Greeks, and Celsus speaks of it among the Romans. It is found all over the world, and in its frequency and virulence is not modified by climatic or geographical conditions; but it is worthy to note that the disease is unknown among savage peoples who have not come in contact with civilized communities. There is no disease so widespread in its dissemination, nor so potent in its influence upon the human species, and none so characterized in the different stages of its progress by a greater number of pathological changes in the tissues of the body. The negro race is believed to be more susceptible to it, and to have it in a severer form than the Caucasian. This may be explainable on the ground that the disease is a comparatively new one to that race, which has not had time to acquire immunity.

Syphilis belongs to what Dr. Farr calls the enthetic order of zymotic diseases, which have the property of being developed in the system after the introduction of a specific poison, and originates in morbid secretions, in conjunction with the disgusting want of cleanliness about the genital organs so common among a large portion of human beings. The term is derived from the Greek *σιφλος*, filthy; and aptly indicates its origin. It is peculiar to the human species, and is always due to contact with a syphilitic individual or with his secretions or discharges, and produces no effect whatever on any of the lower animals, with the possible exception of the monkey. It can not be conveyed in the form of vapor, or, in other words, by breathing air which is contaminated by a syphilitic person. It is necessary that the poison should be applied to some part which is soft or covered with a mucous membrane, or else to some place where there exists either an excoriation, ulcer or wound.

The investigations of Schaudinn show that the disease is caused by the microorganism *spirochæta pallida*, a serpentine and flexile organism, resembling a corkscrew, having sinuous movements like the swimming of a snake or an eel, and found only in primary and secondary syphilitic lesions. It has no delicate, wavy filaments, called flagella, for locomotion, like other bacilli. Its size is about the one-twenty-five-thousandth of an inch. It was at one time believed by the greater number of the medical profession that syphilis and gonorrhea were

caused by the same poison, and that a neglected case of gonorrhea would terminate in syphilis. At the present time, however, all practitioners regard them as essentially distinct, and due to poisons altogether different in their nature. A simple and sure test for determining their difference is by inoculation, which has been brought into great repute by Ricord. If the pus of gonorrhea is inoculated into the skin of a healthy person it will never produce a chancre; while if the pus of a chancre, or any secretion of a syphilitic person, be inoculated, it will invariably produce another chancre. The saliva of such a person contains the specific poison, and in this way inoculation may occur by kissing, and by the use of pipes, spoons, cups, pencils, sticks of candy, plugs of tobacco, etc.; the blood also is capable of spreading the disease by inoculation. The comparison of the coccus of gonorrhea with the organism of syphilis also demonstrates their difference. All authorities now accept the *gonococcus* as the specific cause of gonorrhea. It was first observed in the urethral and conjunctival secretions of gonorrhea, and purulent ophthalmia by Neisser in 1879, and is described as a minute vegetable parasitic, pathogenic organism, biscuit-shaped, non-motile, non-flagellate, and without spores. The immunity to syphilis given to persons who have had it, and to healthy mothers who have borne a syphilitic infant, is another distinguishing feature of the disease. The syphilitic poison operates progressively from the first moment of its application, although it may not be perceived by a careless person till later. In a few days or weeks after infectious exposure a disagreeable itching calls attention to the genital organs, and upon examination, a small pimple, not larger than a pin's head, is observed, or a slight abrasion or fissure assumes an unhealthy appearance. These soon heal over, leaving no visible signs of danger. This is the period of incubation, and lasts from two to six or eight weeks. At the end of this period a hard thickening is felt at the site of inoculation, which soon breaks down into a small excavated ulcer, as if it had been scratched off with the finger-nail. This ulcer is situated on a hard base, and is known as the hard chancre. There is no inflammatory areola, but the edges terminate abruptly, and are elevated, making a deep excavation, like the hole of a shoe-punch. If a patient presents himself with an ulcer thus characterized, within five days from its first appearance, the disease admits of being checked at once, without the necessity of a particle of medicine. The proper method is to excise it with scissors. This is done in an instant by means of a small forceps, so constructed as to grasp the base of the ulcer, then raising it up, a single clip of the curved scissors removes it at once, and with it all apprehension may vanish. Instead of this, some surgeons prefer the application of strong nitric acid, an application which will very commonly suffice to annihilate the specific character of the ulcer. But neither of the foregoing plans can be adopted with safety, if the chancre is inflamed, the patient feverish, or if there is any local swelling or tenderness in the groin. When this is the case, black-wash or iodoform should be applied. The local swelling and tenderness in the groin indicate the formation of a bubo, from absorption of the poisonous secretions of the chancre, and the ordinary time of its appearance is just as the ulcerative stage of the chancre is ceasing. Women rarely suffer from bubo. The best treatment is the daily application of the following ointment:

℞ Ext. Belladonnæ.....1 drachm.
Unguent. Hydrargyri.....1 ounce.
M. ft. unguentum.

As soon as pus has formed, it should be evacuated by a free incision, followed by soothing dressings.

A characteristic set of symptoms now appears. A rash, somewhat resembling that of measles, breaks out upon the chest and abdomen, spreading thence to the face, extremities and back. The rash marks the secondary stage of syphilis, and is attended with constitutional disturbances. There is slight fever, with severe nocturnal headache, pains in the bones, and general indisposition. The tonsils, soft palate and lymphatic tissues of the pharynx become swollen, and, together with the gums, tongue and inner side of the cheeks, are the seat of mu-

cous patches. These are small, grayish or whitish papules, or shallow ulcers which discharge a most infectious secretion. Mucous patches also appear on the inner surface of the nose, the eyelids, about the genitals and arms. The throat is sometimes so sore and painful that eating solid food becomes impossible. Coincident with these changes in the skin and mucous membranes, several other tissues are affected. The periosteum covering the tibia, skull, clavicles, or sternum becomes the seat of inflammatory thickenings, or nodules, tender to the touch. The joints swell. The hair may come off in considerable quantities. The lymphatic glands continue swollen. A small gland just above the inside of the elbow—the epitrochlear—is almost invariably affected in syphilis, and rarely in other diseases, and is, therefore, a valuable aid in the diagnosis of doubtful cases. Syphilitic iritis is apt to occur during this stage. The period of the active manifestations of syphilis, embracing the primary and secondary stages, extends over a year, after which the tertiary stage sets in. The characteristic lesion of this stage is the gummata, which consists of soft, elastic tumors, and may develop in any situation—skin, bones, liver, testes, kidneys, lungs or brain—and vary in size from a hemp seed to a walnut. They are very prone to break down and ulcerate, often resulting in great loss of tissue and hideous scars and deformities. The bony framework of the nose is frequently destroyed. Several disorders of the nervous system, like localized paralysis and convulsions, are due to gummata on the surface of the brain or the roots of the nerves. There is certainly not a more pitiable object to be seen than a man, young, or in the prime of life, suffering from the last stages of this dreadful disease; covered by rupial sores, the lip dropped and saliva dribbling, defective in his articulation, insecure in his walk, dragging one leg behind him, and the victim of the most frightful epileptic paroxyms.

"In the treatment of constitutional syphilis," Dr. Erichsen says: "Our object is not so much to relieve or to remove any local morbid condition, as to eradicate the poison from the system, and, indeed, the various local manifestations, more especially those that appear on the cutaneous and mucous surfaces, may possibly be efforts of nature for the elimination of the virus from the system through the medium of the great excretory and emunctory organs, and it is often apparently by aiding this natural action by the administration of those remedies that act upon the tissues, that the poison is most effectually eradicated." According to these principles the essential remedy is some preparation of mercury, the obvious effect of which is an increased activity in the secreting and exhaling apparatus. Of its value in constitutional syphilis there is abundant proof; but undue preference is shown to some preparations to the exclusion of others; for instance, calomel is too often employed and corrosive sublimate is too much neglected. In these cases reliance may be placed in the following prescription:

℞ Hydrargyri Chlorid. Corrosiv.....4 grains.
Acid Nitro-Hydrochlor.....1 drachm.
Tinct. Cinchonæ Comp.....ad....6 ounces.

M. ft. sol. Dose: One teaspoonful in water three times a day, after meals.

Among other remedies deserving special notice is sodium iodide, which has been used with remarkable success in Italy. It should be given as follows:

℞ Sodium Iodide.....1 ounce.
Tinct. Stillingia.....4 ounces.
Tinct. Sassafras.....4 ounces.
Tinct. Xanthoxylum.....2 ounces.

M. ft. sol. Dose: One tablespoonful in half tumbler of water three times a day, after meals.

These will usually suffice to eradicate the disease.

Free Clinic.

On September 24, 25 and 26 Dr. E. H. Pratt, of Chicago, will hold a free clinic in orificial and general surgery at the Hering Medical College, corner Wood and York streets, Chicago. Tuition and operations free. Doctors invited to bring cases. All schools welcome. For particulars address Dr. E. H. Pratt, 100 State street, suite 1202, Chicago, Ill.

[Written for the MEDICAL BRIEF.]

Congestion of the Portal Circulation.

BY LINTON D. LANDRUM, M. D.,
Columbus, Miss.

Congestion of the portal circulation is called by various names, according to the complications it excites—sometimes being denominated yellow chill, also congestive chill, hematuria, congestion of the liver. But these all arise from this one primary cause.

This disease is peculiar to the South. But why it is that so-called malaria should affect so seriously the liver, but no other organ, we do not know any more than we know why the Southern sun should paint the iris a beautiful brown and the hair a glossy black.*

Congestion of the liver is always accompanied by fever, and the fever is in ratio with the intensity of the congestion, and its intensity adds much to the peril of the patient.

This disease frequently does not manifest itself until the subject of the malady has passed *in extremis*.

In such cases the portal congestion has become so violent that the man, engaged, perhaps, in his ordinary occcupation, falls unconscious, and is thus borne to his home. By the time the physician reaches him his skin has assumed that characteristic appearance denominated "goose skin," thus indicating that the blood has deserted the superficial circulation, and is moving only in its deep courses. This is owing to the nervous shock by which the nerve supply from the brain to these smaller vessels is cut off, further indicated by the coma in which the patient lies. Now is the time when something must be done—done effectually and at once—for already the patient's cheeks brush the dews of the river of death, and the crossing can not be far away. It is in cases of this kind that calomel comes to the patient as a messenger of life, arousing the dormant secretions, opening the flood gates, and turning back the deadly trend.

In one case the physician reached the patient about eleven o'clock A. M., found him in the condition above described. The physician at once administered to the patient thirty grains of calomel, and left, remarking to the overseer on the plantation that the negro man would likely recover if he lived long enough for the medicine to act. As to that, replied the overseer, if that negro was the only cause you had of returning here, I would advise you not to come, for he will certainly be dead before the setting of the sun.

On visiting the plantation the next morning there were several others sick, and going into this negro's cabin, the physician found his patient sitting up on the side of the bed and asking for soup. Full doses of quinine were prescribed for the two following days, when the patient was discharged.

There are some cases in which the collapse is so profound that there is not sufficient bodily power—vital power—to sustain the action of the calomel. Thus the physician found the patient, a lady, in a state of collapse, but her mind was perfectly clear—differing in this respect from the case above described. But, though her mind was unclouded, she had no realization of her extreme peril. On being asked how she felt, she replied: Oh, I feel pretty well, Doctor. I think, with your assistance, I will be up and about in a day or so. In less than two hours from that time she was dead.

In another case the patient was taken with a chill on Saturday. Not much was thought of this. On Sunday he had a second chill with high fever. Physicians were sent for—two of them. These physicians seemed to have given the patient everything they could think of except the right thing. Another physician was called in about seven o'clock Monday morning. This physician found the patient with something like black vomit—that is, he was vomiting profusely dark, bilious vomit, and sinking rapidly. It was too late for medicine to have time to act, and he only suggested that the patient be allowed to die in peace. By ten o'clock he was dead. Here a fine young man, the idol of his parents, died, whose life

* Only the negro has the "jet black eye," or those that have negro blood in their veins, as the white mulatto. Though the white man's eye may look black, if you turn the light on it you will discover that the eye is a beautiful brown.

might have been saved by unlocking his liver with a large dose of quinine, followed by quinine in similar proportion.

In cases of this character delays are dangerous. You must do what you are going to do at once. Calomel is your sheet anchor; there is nothing that will take its place.

I will mention only one more case of this character: This was a young negro man about twenty-nine or thirty years of age. This man fell in the field, and was borne to the house in an unconscious condition, and was so found by the physician. He was given thirty grains of calomel, and in two hours' time he became conscious, and awoke with a violent pain in the region of the liver. The pain in the liver was so extreme and excruciating that he was given chloral and deodorized opium. Pretty soon this strong narcotic, which I have never seen fail to relieve pain, began to have its effect, and soon the patient was drunk. He felt good and happy—the negroes on the plantation, especially the women, were all assembled around his bedside, expecting him to die, and, after their manner, began to sing, and the patient joined them in the song. He sang lustily, and, being drunk, and feeling good, he called out to one of the negro women: "Aunt Jane! Aunt Jane! I ain't gwine to heben wid no lie in my mouf. I stole dat pullet of yourn, and you will find it under dis bed tied to de hine bed-post wid er string. Yes, you take dat chicken. I'se gwine to heben in white róbes." The calomel acted fully and freely, and the patient was soon well.

I would call attention to this pain in the liver. I have never witnessed it prior to the last five or six years. It rises with the fever, and when not otherwise relieved it passes off with the fever. I at first thought that its extreme violence might be due to gall-stone, but, in every case in which I have found it, there was no trace of gall-stone. On the contrary, the pain rising with the rise of the fever and abating with the fever shows that the pain is caused by the congested state of the liver acted on by the fever. Morphine has failed in every instance to relieve this pain, but it is always relieved by the chloral and opium.

[Written for the MEDICAL BRIEF.]

The Specific Indications for Wine.

BY C. D. R. KIRK, M. D.,
Shuqualak, Miss.

The doctor who prescribes wine or whisky promiscuously because he is fond of it, may be a very good fellow, but a poor excuse for a physician. The indications for wine are not only those for a stimulant, but those for an acid, and many times those for a sedative, or one that will control the rapid, weak heart. It is in no case a remedy for the patient that is saturated with acids. But how are we to know the man whose blood and secretions are loaded with alkalies or acids? Must we draw some blood and carry it through a chemical process? If so, only a small per cent of physicians would recognize the case. Those who have a contracted red tongue are, in almost any case, benefited by taking wine. A case of indigestion, with the red, contracted tongue, can take wine in small quantities, with more or less benefit; in fact, any chronic case with that kind of a tongue will find a small drink of wine just before meals, to be beneficial. A case of fever, especially typhoid fever, who has the contracted red tongue, moist and associated with a rapid, weak pulse, should have wine in large quantities. The heart sounds are almost blended, so that the last sound can with difficulty be separated from the first. These cases have cold extremities and labored respirations, and are semi-delirious, and they need the old doctor very much! They should have wine; a good article, given in increasing dose. Begin with a small wineglass every hour at first, but gradually increase the dose until the heart's action is brought back to something near normal. This requires a large quantity, but it is worth all the rest of the *materia medica* in such cases. After the patient's pulse has improved, breathing is normal, and sleep is induced. Omit the wine until all impressions from it have passed away, then, as the fever rises the next day, and the pulse again runs to extremes, repeat the wine, but omit it when the patient sleeps and the pulse gets slower and of full volume.

When wine is indicated, all other remedies should be suspended, for when needed it is almost invariably curative. This rule holds good in dysentery or pneumonia, or any other case, the same as in typhoid fever; therefore it makes no difference what a grouping of symptoms may name the disease, if there is a moist, red tongue, with rapid small pulse (or the full pulse, without power), wine in liberal quantities will be beneficial. An anthrax presenting the above pathological or diseased condition, should have wine in supportive doses. But what about the case with the abnormal pulse and a full, frosty-white coating of the tongue? Then wine is not indicated, because it will add to the already overplus of acids. In this case soda, alkaline diuretics and alcohol in the form of good brandy or whisky should be given. The pulse being the thing to guide us, the alcohol should be given until there is a full pulse, with strength and power. Then we may look for all other symptoms to improve. A fluid diet should be given hot, and often repeated in small quantities.

[Written for the MEDICAL BRIEF.]

A Plea for Mild Medication.

BY JOHN M. REID, M. D.,
Eureka, Kan.

I believe it to be the mission of a physician to give his patients the best and least painful service at all times. I wish to present a case that befell a lady south of our city not long since. Her doctor reports that she was taken with cholera morbus. He gave her the usual remedies, but she constantly grew worse. He returned only to find her case aggravated. After a week's medication, he resorted to most strenuous measures, such as chloroform, ether, opium, laudanum, morphine, hypodermics of glycerine, warm water, salt solution, etc., until her arms, abdomen and gluteal muscles were masses of inflamed sores, caused by prickings of the needle.

Now, brethren, this is penned, not in the spirit of fault-finding, but in mercy for the patient.

Another physician was called and gave almost immediate relief by a few drops of leptandrin. The stools were dark, like tar, very fetid, and would remind you at once of the results following a large dose of leptandrin, therefore, the case was easy, and one that almost any one should have solved readily.

Brethren, for humanity's sake do not torture your patient, and do not fly to opiates, thus masking the symptoms that are the only sure guides to a speedy cure.

[Written for the MEDICAL BRIEF.]

Natural Foods.

BY N. A. BOLLES, M. D., D. O.,
Denver, Colo.

The herbs and fruits are the only natural foods for mankind. Other foods are allowable only because one has inherited or acquired a taste for them, and only when hungry for them, after trying to be satisfied with herbs and fruit. These other foods are the roots and non-starchy bulbs, the tubers, nuts, grains and all animal foods.

First Choice—Herbs and fruits, as cabbage, lettuce, celery, kale, cauliflower, pieplant, dandelion, spinach, Brussels sprouts, lamb's-quarter, shepherd's purse, asparagus, cucumbers, tomatoes, squash, pumpkin, melons, canteloupes and green beans and peas. Apples, pears, peaches, plums, apricots and oranges, pomelo (grape-fruit), lemons, figs, prunes, dates and pineapple. Bananas only under protest; too apt to be starchy.

Second Choice—Roots and non-starchy bulbs; such as carrots, beets, turnips, radishes and onions.

Third Choice—Tubers, such as potatoes and sweet potatoes.

Fourth Choice—Grain and nuts, wheat, rye, barley, oats, rice, corn, peanuts, pecans and any other kind of nuts.

Fifth Choice—All animal foods of whatever class and variety.

1457 Ogden Street.

Book Notices.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. For Students and Practitioners. By Hobart Amory Hare, M. D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium and of the Medical Society of London. Author of *A Text-Book of Practical Therapeutics; A Text-Book of Practical Diagnosis*, etc. In one very handsome octavo volume of eleven hundred and twenty pages, with one hundred and thirty-one engravings and eleven full-page plates in colors and monochrome. Second Edition, revised and enlarged. Lea Brothers & Co., Philadelphia and New York: Price, cloth, $5.00; leather, $6.00; half morocco, $6.50.

One of the most uncommon and highly valuable mental faculties is judgment of relative importance, an ability to conceive ideas distinctly enough to measure them, and to picture them in their proper perspective. Such a faculty collects, arranges, sorts, drops what is unimportant, and seizes what is essential. Clear vision is clear thought, which finds its expression in clear language. Such qualities embodied in a book account for keen public appreciation, and this is the explanation of the fact that two very large printings and now a thoroughly revised edition of Hare's Practice have been demanded in less than two years. The author has written for medical students of all ages. He knows the needs of the undergraduate and the best mode of presenting a subject to his mind by reason of the fact that he has been teaching clinical medicine and therapeutics for nearly a quarter of a century, and the same length of active hospital and private practice gives the weight of experience which attracts the physician in need of counsel. Well-proportioned consideration is given to the theory and principles of medicine as underlying, explaining and leading up to the main objective point, namely, the practical application of the knowledge. Accordingly, particular pains have been taken to present methods of treatment clearly, and in such a way that they may be put directly into practice. Such have been the characteristics of the work from its original issue. In this new edition every line has been revised, anything already rendered obsolete by the rapid march of medicine has been eliminated, and all trustworthy advances have been incorporated, so that the volume, as it stands, is representative of its subject to date. Of its authority and resourcefulness, nothing need be said further.

DISEASES OF THE LUNGS. Designed to be a Practical Presentation of the Subject for the Use of Students and Practitioners of Medicine. By Robert H. Babcock, A. M., M. D., Author of "Diseases of the Heart and Arterial System"; until recently Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons (Medical Department of the Illinois State University), Chicago, etc., etc. Twelve colored plates and one hundred and four text illustrations. First Edition. New York and London: D. Appleton and Company. Price, $6.00.

This work is a companion volume to that upon Diseases of the Heart, published a short time ago. After thorough reading of this work we believe it is more comprehensive than any we have yet seen, as the author's individuality and his attractive style is fully shown throughout. The many records of interesting cases are helpful in diagnosis to the general practitioner. Differential diagnosis and treatment are given the attention their importance demands, and as a consultant it will prove worthy. It seems to us that the work stands alone in its class.

MANUAL OF CLINICAL CHEMISTRY. By A. E. Austin, A. B., M. D., Professor of Medical Chemistry and Toxicology in the Medical Department of Tuft's College, Boston. Boston: D. C. Heath & Co., Publishers. Price, $1.75.

The average work on chemistry is not written for the needs of the physician, therefore when we run across a work that has a close connection with medical practice we take pleasure in calling the attention of our medical friends to its applicability along medical lines. Not alone is this work a good one for the practitioner, but the first and second-year student will appreciate it as helpful. Students especially will find much of worth in this volume.

A MANUAL OF NORMAL HISTOLOGY AND ORGANOGRAPHY. By Charles Hill, Ph. D., M. D., Assistant Professor of Histology and Embryology, Northwestern University Medical School, Chicago; Formerly Professor of Zoology, University of Washington. Illustrated. Philadelphia and London: W. B. Saunders & Co. Price, $2.00.

This is one of the flexible leather books that are so much in vogue to-day, yet the value of a book is governed more by the contents than the manner of its presentation. This book is valued more for what it contains than any attempt at the convenient shape and adjustment to conveniences. Along the elementary line it has the facts of the subject in a clearer manner than any other work of its class that we have had the pleasure of reading. It is well worth the time spent on reading up the subject of Histology.

MEDICAL DIAGNOSIS. A Manual of Clinical Methods for Practitioners and Students. Fifth Edition, greatly enlarged and revised to date. By J. J. Graham Brown, M. D., F. R. C. P. E., F. R. S. E., Assistant Physician, Royal Infirmary of Edinburgh; and W. T. Ritchie, M. D., F. R. C. P. E., F. R. S. E., Clinical Assistant Pathologist, Royal Infirmary of Edinburgh. With two hundred illustrations and eight full-page plates. New York: Imperial Publishing Company. Price, $3.00.

A book is certainly popular when five large editions have been issued, and when we find that it has been carefully revised we fully predict for it a future that should guarantee more editions. The illustrations are profuse and enhances the value of the text matter. It certainly will prove valuable to the busy practitioner, as it will guide him quickly to up-to-date matters in regard to diagnosis. The medical student will find much material to guide him and lend aid to his future in diagnosing cases. It is invaluable to both practitioner and student.

MEDICAL DIAGNOSIS. A Manual for Students and Practitioners. By Charles Lyman Greene, M. D., Professor of the Theory and Practice of Medicine in the University of Minnesota; Attending Physician St. Luke's Hospital, the City Hospital and the St. Paul Free Dispensary; Member of the Association of American Physicians, the American Medical Medical Association, American Association for the Advancement of Science; Author of "The Examination for Life Insurance and Its Associated Clinical Methods," etc. With seven colored plates and two hundred and thirty illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $3.50.

This volume embodies the author's conception of the type of book most generally useful to the over-taxed student and general practitioner, and a glance at its pages will show that he has made it concise, practical and thoroughly modern, not to mention its convenient size and form. It is not a mere compend, as it covers the ground-work in a very elaborate and thorough way. It is complete and logical and should have the recognition that it deserves. We commend it to our friends.

THE PRACTICAL MEDICINE SERIES. Comprising ten volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. VIII—MATERIA MEDICA AND THERAPUTICS, PREVENTIVE MEDICINE, CLIMATOLOGY, FORENSIC MEDICINE. Edited by Geo. F. Butler, Ph. G., M. D., Henry B. Flavill, A. B., M. D., Norman Bridge, A. M., M. D., Daniel R. Brower, A. M., M. D., LL. D., Harold N. Moyer, M. D. Also Vol. IX, ANATOMY, PHYSIOLOGY, PATHOLOGY, DICTIONARY. Edited by W. A. Evans, M. S., M. D., Adolph Gehrmann, M. D., William Healy, A. B., M. D., Chicago. The Year Book Publishers. Price, $1.25 each.

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THE MEDICAL AND SURGICAL USES OF ELECTRICITY. Including the X-Ray, Photo-Therapy, the Finsen Light, Vibratory Therapeutics, High-Frequency Currents and Radio-Activity. By A. D. Rockwell, A. M., M. D., with two hundred and fifty-nine illustrations. New edition, revised and enlarged. New York: E. B. Treat & Co. Price, $5.00.

There is no work along this line that has the prestige accorded this one. Practically, this is the eleventh edition of this work. It is the most elaborate and complete work on this subject that has ever been issued. If you want to get thoroughly posted in medical and surgical electricity it would be well to secure this book.

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Editorial.

Danger in Prescribing United States Pharmacopœia and National Formulary Preparations.

There is a drug paper published in Chicago called *N. A. R. D. Notes*. It is the official organ of the National Association of Retail Druggists, the largest and most powerful association of retailers that was ever organized in this or any other country. As the organ of the druggists, it has been devoting much space to the question, which is being agitated in the trade just now, of popularizing, with physicians, the United States Pharmacopeia and National Formulary Preparations. But it appears to be fair in its treatment of the subject, for it publishes communications on both sides of the question. Among the communications *against* the idea, is one from Dr. J. J. Gill, of Chicago, who was himself once a pharmacist, but who, a short time ago, abandoned that profession and took up the study of medicine. He is now in active practice, and has built up quite a large clientage. In the communication referred to, Dr. Gill tells his readers that when he began to practice medicine he resolved not to prescribe proprietaries, but determined to confine himself to the use of the so-called official preparations. He says, however, that he soon found this to be impracticable, for the reason that *druggists were not acquainted with the United States Pharmacopeia and National Formulary*, did not recognize many of the preparations contained in them when they were prescribed by name, and did not know how to prepare them; and that he had soon to give up the idea he had cherished of being strictly "ethical" as to the remedies he employed. We publish this doctor's letter in full, for, having been a pharmacist, he is in a better position to discuss the matter than could physicians generally, who are not so well acquainted with the conditions that prevail in the drug trade. We commend this letter to the thoughtful

consideration of physicians everywhere, and ask them if they are willing to be persuaded or bulldozed in prescribing preparations that druggists are not able to prepare, in place of those they have often tried, and whose merits have been clinically proven.

The following is Dr. Gill's letter:

DIFFICULTIES TO BE OVERCOME IN POPULARIZING U. S. P. AND N. F. PRODUCTS.

EDITOR N. A. R. D. NOTES.—As a pharmacist I labored for fifteen years in Hyde Park endeavoring to induce the physicians to write prescriptions rather than dispense their own medicines, and also to demonstrate to the prescriber the value of prescribing official rather than proprietary preparations. But the success that attended my efforts was not great. I found the physicians indifferent and few of them were convinced that my arguments were sound. This apathy mystified me, and I failed to understand why the physicians could not see the situation as I saw it.

But when I began the practice of medicine several years ago I began to have a different view of the question; then, and not until then, did it dawn on me why physicians prescribe proprietory medicines and others do no prescribing at all. I have been surprised and chagrined at the things which have come under my observation, and had I not the best interests of the druggists at heart, I would remain silent rather than say anything on the subject.

OFFICIAL PRODUCTS UNKNOWN IN SOME STORES.

Long before I finished my medical course I made a vow that I would never, under any circumstances, prescribe any preparation other than those found in the National Formulary and the Pharmacopœia. However, in the course of my practice, I found my vow to be a source of never-ending vexation and annoyance to me as well as to the pharmacists, *for the reason that these official products are almost unknown at some stores.* On one occasion a clerk called up and asked if he might substitute P. D.'s elixir, giving as his excuse that they kept no goods manufactured by *N. F.*!

On another occasion I prescribed Eloesaccharum Anisi and *the prescription was held for twelve hours because of the difficulty in getting this rare* (?) *preparation.*

A short time ago I gave a patient a simple prescription which was taken to a near-by store for compounding. There the patient was told by the druggist that the prescription called for a very rare preparation, and that it would take, at least, two days to fill it.

AN ANTIQUATED DISPENSATORY.

When I saw the patient on the following day I found that he had not yet taken any of the medicine and he complained because I had given him a prescription so difficult to fill. I called up the pharmacist and learned just what I had suspected, namely, that there was nothing but an antiquated Dispensatory in the store, and consequently the rare (?) preparation, Elixir Adjuvans, had never been heard of. Any fair-minded person will admit that the action, or ignorance, if you please, of the druggist was absolutely inexcusable, and an injustice to me.

Pharmacists are continually complaining of the use of proprietary articles, but *should the physician be blamed if he uses them when he finds it almost impossible to get anything else?* As a good example of what the physician has to contend with in this way, I will say just a word about the difficulty I have experienced in trying to obtain the official preparation Liquor Cresolis Compositus.

Every one who possesses a Pharmacopœia (and a druggist who has no copy of this book can not call himself a pharmacist), knows that this is a product easy to prepare and is much cheaper than Lysol, yet about two-thirds of my orders for it have met with difficulty. One druggist dispensed Creolin, and several others turned away the prescriptions. But the climax was reached when one druggist told my patient that Liq. Cresolis Comp. was a secret preparation to be had only at my store, and that I prescribed it in order to force the patient to take all prescriptions to my pharmacy. Could anything be more unjust to a physician who is trying to assist the druggists in bettering conditions in the business?

WHY AGITATE PATENT MEDICINE QUESTION?

And this leads me to raise the question: Why waste so much time, money and energy in agitating price protection for patents when the real live issues of pharmacy are neglected? If the druggists would spend half the energy they devote to the patent medicine question, in an effort to show the physicians that they understand their business, they would find that the relative unimportant patent medicine price craze would be lost in oblivion. Druggists can not expect the support of physicians unless they know something about pharmacy.

JOHN J. GILL, Ph. G., M. D.

Chicago, August 5.

His Magnificenz, Rector Von Sybel, of the University of Marburg, wrote to Dr. Rose that the "Memorial on Medical Language," the first part of which appeared in the September issue of THE MEDICAL BRIEF, had been distributed among the rectors magnifici of all the German universities assembled in Marburg on July 31st. Some distinguished German physicians have already expressed their approval of the idea presented in Dr. Rose's memorial.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR.
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[Written for the MEDICAL BRIEF.]

The Action of Alcohol in Health and Disease.

BY WALER E. DIXON, M. A., M. D., B. SC., D. P. H.,

Professor of Materia Medica and Pharmacology in King's College, London, and Assistant to the Downing Professor of Medicine in the University of Cambridge. Cambridge, England.

The question whether alcohol, in moderate doses, affects the body injuriously or not is one of great importance, not only to the individual, but to the nation at large. The advocates of teetotalism would have us believe that alcoholic beverages only make for evil, that they shorten life, tend to promote disease, and, even as a remedy, are more likely to cause harm than good.

So long as these statements are made merely as matters of personal opinion they may be disregarded; but when they are made by scientific and medical men it is right that the facts of the case should be stated, and that true temperance should be distinguished from total abstinence.

Everyone is agreed that anything taken in excess will lead to evil results, and we are not here concerned with the intemperate use of alcohol.

The first question which arises is, "What becomes of alcohol when taken by the mouth?" and to this a definite answer can be given. If alcohol is taken in moderate quantities it is almost completely oxidized in the body to carbonic acid and water, in much the same way as starch or sugar, and as the human body is continually burning up food substances in order to keep up its temperature, we are naturally led to believe that alcohol provides some of the necessary fuel for this purpose. Now, it might be supposed that this alcohol would be burned up at once, and so provide the body for a short time with an excess of useless heat.

This is not the case, for the alcohol is burnt just as it is required, in exactly the same way as starch or fat. For example, supposing a man is kept on a fixed diet, and made to perform the same amount of work every day, then his weight soon becomes and remains constant; if, now, some of the starchy food or fat is taken from his diet, he naturally loses some weight. If, however, this starch or fat is replaced by an equivalent amount of alcohol, his weight will remain unaltered. Hence, to a moderate degree, alcohol can replace starch or fat in a diet.

We are all familiar with the fatness of the beer-drinker, and, to a less extent, of the spirit-drinker, and in them the deposition of adipose tissue is, no doubt, brought about by the alcohol being oxidized in place of fat, though, in the case of the beer-drinker, the deposition of fat is due, partially, to the large amount of saccharine matter taken.

The perfect diet, besides containing water, salts, starchy and fatty food, must

also contain proteid. It has been shown already that alcohol can replace the starch or fat without any evil effect, such as loss of weight; but if some of the proteid food is taken away from the fixed diet and substituted by alcohol, the result may not be the same.

If the man under experiment is moderately addicted to the use of alcohol he does not lose weight—that is to say, the alcohol is used to spare his proteid. If the man is not used to taking alcohol the substitution leads to some loss of weight for a few days. His tissues, however, learn to deal with the alcohol very quickly, so that even in the teetotaler, after a few days' trial, alcohol not only can be substituted for some of his fat, but for his proteid also.

In other words, in all classes of people, alcohol is oxidized usefully in the body. It supplies the body with heat, and by providing a readily oxidizable substance, it spares some of the carbohydrate, fat, or proteid, which would otherwise be broken down to produce the requisite temperature. Alcohol has certain advantages over starch and sugar as a food, in that weight for weight it contains more energy, and because it is absorbed so easily and rapidly.

Starch and sugar are not digested and absorbed into the blood until they reach the small intestine; alcohol, on the contrary, is absorbed from the stomach. From this it can easily be seen what a valuable substance alcohol may be in any condition where an easily combustible food is desirable. The following table shows a comparison of some common foods with alcohol, as regards their heat value:

Material.	Water per cent.	Fuel value per lb. in calories.
Beef (round)	63.5	950
Cow's Milk	87	300
Wheat Bread	35.3	1,200
English Beer	88	275
Brandy	52	1,475
Whisky	59	1,250

In considering this table, from Dr. Atwater's work, it should be remembered that the figures only hold when the quantity of alcohol imbibed is moderate. When alcohol is present in such large quantities that the tissues are incapable of dealing with it, toxic effects will accrue which may more than counterbalance the benefits.

ACTION ON THE CIRCULATION.—For convenience of description this action will be taken under four sub-headings, (*a*) the rhythm of the heart, (*b*) the cardiac output, (*c*) the vessels, (*d*) the blood-pressure.

(*a*) *Effect on Cardiac Rhythm.*—Zimmerberg experimented with frogs, cats, dogs and men, and concluded that, when proper precautions were taken to avoid local irritation, alcohol did not alter the pulse rate. Von de Mühll and Jaquet experimented with eight convalescent men, and concluded that alcohol in amounts varying from fifty to one hundred cubic centimeters, diluted to twenty per cent, had practically no action on the heart or circulation. Maki and Hemmeter also state that alcohol does not alter the rhythm of the heart. Parkes and Wollowicz, Marvaud, Binz, Foster, and others, state that alcohol increases the pulse rate. Martin and Stephens gave fifteen cubic centimeters of alcohol to a young man, taking due precautions as to dilution; they failed to notice any change in the pulse rate.

Ringer and Richards state that in health alcohol slows the pulse, whilst Lichtenfels and Fröhlich and von Jaksch describe a preliminary slowing, followed by acceleration. Von Jaksch administered eight cubic centimeters of brandy to a number of children; he found decrease in the pulse rate in nine cases, and increase in one, and no change in two. After 3.2 grams of alcohol, properly diluted, the results were of the same character.

From this medley of observations it is at once evident that whatever the changes in pulse rate may be they are neither constant, nor of any great significance. The amount of time which has been expended on such observations is out of all proportion to their importance; but it was formerly believed that if it could be shown that alcohol accelerated the pulse, it had a right to the title "cardiac stimulant." When concentrated alcohol, twenty to fifty per cent, is taken by the mouth, the pulse, during the space of a minute or two, is always accelerated. This is not an action peculiar to alcohol, and it can be observed after the administration of any irritant, such as mustard and water.

or even after water alone, if it is sufficiently hot. As is well known, any mild peripheral stimulation causes acceleration of the pulse.

To test the value of these statements I have performed a number of experiments on men using different stimulants. The subject was placed in as comfortable a position as possible; one radial artery was adapted to the sphygmograph, so that the pulse could be recorded at will. Whilst the record was being taken the man was required to hold in his mouth for a few seconds, or to swallow, some of the stimulant. By this means it was easy to show that alcohol, as a fifty per cent solution, was a more efficient "stimulant" than the other substances (mustard, essential oil, hot water) which were tried, and that it quickened the heart considerably. If the alcohol was retained in the mouth a few seconds only and was then spat out, the effect quickly passed off, but if it was taken into the stomach the acceleration was prolonged for half an hour or longer. When the same amount of alcohol is given, well diluted, these effects are not seen.

If moderate doses of alcohol, well diluted with water, be administered to animals or men, the pulse rate does not alter. I have tried these experiments over and over again, and always with the same results. The popular fallacy that alcohol quickens the pulse is clearly derived from the conditions under which alcohol is usually taken. It is well known that excitement of any kind quickens the heart, and alcohol is generally taken under exciting circumstances.

If a heart is beating feebly, alcohol invariably accelerates the rhythm, quite apart from the reflex effects just described; for example, at the end of a long perfusion experiment, small doses of alcohol not only improve the quality of the beat, but increase the rate.

Large doses of alcohol administered to the normal animal slow the heart beat. This action is not obtained on the isolated heart, nor when the vagi have been severed, but only in an animal having an intact medulla. Now alcohol administered in large doses behaves, in many respects, like chloroform, and belongs to the same group of narcotics. It differs from chloroform because within certain limits it is oxidized in the tissues. If, then, it is required to determine its action upon nervous structures, neither chloroform nor other anesthetic substance should be present in the tissues. Large doses of alcohol, administered to an animal under the influence of chloroform, have little power of slowing the heart, but to the unanesthetized animal the slowing may be very decided, or there may be even complete inhibition.

Cerna, Jaquet and others have denied that alcohol excites the medulla, but, in view of the conclusive experiments conducted by Binz and his colleagues on respiration, it must be conceded that alcohol, to both men and animals, is a decided stimulant to the medulla. Such stimulation being granted, Schmiederberg and his pupils would regard it as due to dissolution of the higher centers, and not a primary effect on the medulla. My experiments show, conclusively, that large doses of alcohol increase the activity of the medulla for a period, during which the heart-beat becomes slower, and this effect can not be due to dissolution, since the animal is decerebrate. Large doses of alcohol ultimately produce depression of the medulla and the heart quickens again. In smaller doses the effect on the vagal center is not apparent, though the effect on the respiratory center, as Binz has clearly shown, is decided.

From these facts it is evident that after administering alcohol many factors are at work tending to alter the rate of the heart. First, the strength of the alcohol must be considered, concentrated doses exciting the mucous membrane of the mouth and stomach, and causing reflex acceleration; then the conditions under which it is imbibed, exciting or otherwise; the quantity taken, and the amount of peripheral dilation are other important factors which require controlling.

(*b*) *Action on the Heart.*—Martin and Stevens perfused the dog's heart by the method devised by Martin. They found that 0.125 per cent alcohol, by volume, in the perfusing blood, had no effect, but that double this strength diminished the work of the heart in one minute. They assumed that this amount of alcohol was equivalent to taking five ounces of brandy.

Hemmeter and Bock confirmed these results; they considered that alcohol had no special effect on the heart. Hemmeter, working with Ludwig's Stromuhr, showed that alcohol increased the velocity of the circulation in the dog's carotid, and this has been confirmed by Wood and Hoyt. Loeb perfused the isolated cat's heart with saline, and found that alcohol, in amounts varying from 0.13 to 0.3 per cent, generally increased the force of the beat. Larger doses depressed the heart. Somewhat similar results have also been obtained by Kochmann, Tunnicliffe and Rosenheim, with the same methods, obtained little effect on the rabbit's heart.

The first series of experiments were conducted upon the isolated rabbit's heart, perfused with Ringer-Locke's solution, by means of the Langendorff apparatus. The hearts were allowed to record for about one hour, and when the beat was quite constant the saline solution was changed to one containing the alcohol. It was found that certain strengths of alcohol generally increased the amplitude of the contractions. This effect was observed in strengths varying from 0.05 to 0.3 per cent in the rabbit. It was most marked in feeble hearts, which had been beating for some hours without nutriment, and was least marked, or even entirely absent, from vigorous organs, especially when these were freshly isolated or provided with nourishment, such as glucose. There can be little doubt that within certain narrow limits the heart can adapt itself so as to deal with and make use of the alcohol, just as we know the body, as a whole, is able to do. But complete proof of this will only be forthcoming when it is shown that the alcohol in the perfusing fluid, disappears, in part or whole, after passing through the heart; such experiments are being arranged in my laboratory.

If alcohol in greater concentration, such as two per cent, be perfused through the coronary vessels for a short period, such as thirty seconds, the force of the beat is greatly diminished. The muscle fiber is not injured, however, because when the alcohol is replaced by saline, not only does the heart recover completely, but the beats become much more vigorous than before. These experiments on the isolated rabbit's heart have been repeated on the cat, and the results obtained are of the same nature.

Another series of experiments was conducted on the hearts of cats and dogs with the circulation intact. In these experiments the brain was usually destroyed, but in a few cases the animals were anesthetized with chloroform and urethane. The heart was enclosed in a glass cardiometer, and the movements of the air recorded, so that as the heart fills with blood the recording lever rises, and during systole of the heart the lever falls. The results of such experiments show that the action of alcohol, whether administered intravenously or subcutaneously, is to increase the output from the heart; relaxation is greater than before, and the systole is somewhat increased.

It is clear that alcohol possesses two entirely different actions, it excites in small doses, but depresses in larger ones. In this respect it resembles no other drug, for when we increase the dose of other drugs the effect is at first exaggerated, and only with enormous doses does paralysis ensue. But with alcohol there is a definite limit to the dosage, to overstep which is depression. In other words, to increase the dose with alcohol is to cause a different type of effect.

It is well known that alcohol is oxidized in the body and yields energy; and the experiments of Atwater and Benedict have made it abundantly clear that the alcohol is not burnt up uselessly, but that it can be isodynamically substituted for carbohydrates or fats. In this sense, then, alcohol is a food. But the tissues can oxidize only a limited amount, and if this is exceeded the toxic effect of the alcohol becomes evident. Immunity to organic substances, such as morphine and alcohol, is the expression of the increased ability of the tissues for their oxidation; and the tissues may be cultivated to a greater or less tolerance by the continual administration of the drug.

The "stimulant" action of small quantities of alcohol on the heart is readily explained by regarding it as an expression of the food value of the drug, and for the following reasons: We know it acts as a food to the tissues as a whole; why, then, should it not so act to each separate tis-

sue, *e. g.*, the heart? In animals rendered somewhat immune to the action of alcohol, it behaves as a more decided stimulant to the heart than in control animals, thus suggesting that the heart behaves like the tissues, as a whole. Moreover, its action on the heart shows many resemblances to certain other foods, such as sugar, the effect being most decided when the heart has been beating for some time whilst deprived of food. The addition of sugar to the perfusing saline fluid during a Langendorff experiment, is to cause an increase in the excursion of the lever, and the same effect, though less defined, is obtained with alcohol. But alcohol differs from sugar, because if the dose is increased toxic effects come into play. Alcohol, given by the mouth, has this advantage over other foods, that it very rapidly finds its way into the circulation, and, unlike sugar, it can be absorbed directly from the stomach.

I would point out that alcohol is normally found, though in minute quantities, in the fresh tissues of man and animals that have received no alcohol. It can be distilled off from the liver, muscle, brain, and other tissues. Since we know that small quantities of dextrose and alcohol are readily oxidized in the tissues, it is not improbable that dextrose is oxidized in successive stages, and that the oxidation passes through the alcohol stage, energy being liberated at all stages in the oxidation. As we are daily obtaining more and more evidence that the so-called "vital" phenomena are in reality fermentations, it seems to me feasible that such oxidations might be brought about by a series of co-ordinated ferment actions. That such an explanation is possible is seen from the fact that the ferments in yeasts will oxidize dextrose to the stage of alcohol, and those in mycoderma aceti will continue the oxidation.

(*c*) *Action on the Vessels.*—When administered to the intact animal, alcohol does not affect all vessels in the same way. But if it is perfused through the vessels of organs which are isolated from the body, the effect is the same in all cases. In frogs, one-half per cent alcohol in the perfusing fluid determines an immediate, though moderate constriction, which is very permanent in character, but which is removed by substituting pure Ringer's solution for that containing alcohol. In mammals small amounts of alcohol, such as 0.1 or 0.2 per cent, cause very slight dilatation when perfused through isolated vessels. If the percentage be stronger, about one or two per cent, then constriction, quite considerable in extent, first ensues, followed later by dilation. All vessels, pulmonary and coronary, as well as systemic, are affected in just the same way, so that the action must be on muscle. In part, these results agree with those of Kobert, who found that alcohol in dilute solution, 0.1 and 0.2 per cent, had little effect when perfused through the renal vessels.

These experiments show that the action of alcohol upon the blood vessels must be partly central. Drugs which affect the center do not influence all blood vessels in the same way. Thus, atropine excites the medulla and basal ganglia in the brain, but whilst constricting the splanchnic vessels it dilates the superficial ones. Alcohol also dilates the skin vessels very rapidly, and at the same time tends to constrict the vessels in muscle tissue, and to a less marked degree in the splanchnic area.

The effect on the skin vessels has been investigated by the plethysmographic method on the ears of dogs and rabbits; in anesthetized animals alcohol caused decided constriction, whilst the volume of the limb in the dog also diminishes, and this effect is obtained no matter whether the drug is injected under the skin or given by the mouth. The effect of a subcutaneous injection of alcohol is to produce a gradual rise in blood-pressure, with but little apparent change in the condition of the vessels. In this case there must be a marked tendency towards constriction, since, if the vessels were in their normal state they would become considerably dilated, passively, from the rise in blood-pressure. By perfusion experiments it has been already demonstrated that this effect may be peripheral on the vessel walls, but it is more likely partly central. It can easily be shown that alcohol exerts a stimulant action on the brain, by injecting a little, well diluted with Ringer, up one carotid artery towards the brain.

The effect of alcohol, as ordinarily administered to man, on blood vessels, must be mainly central. In moderate doses the superficial vessels tend to dilate, and the internal vessels tend to constrict. This dilation of the superficial vessels is sometimes the exact opposite to that occurring in dogs when large doses of alcohol are administered, either by injection or by the stomach tube. The explanation of this is simple. We know that drugs which excite the medulla and basal ganglia of the brain whilst constricting the internal vessels, simultaneously dilate the superficial ones. This is the reaction of the organism against rise in temperature; stimulation of the corpus striatum augments metabolism, and drugs which induce this effect invariably dilate the skin-vessels. Atropine may be regarded as a typical drug, which, by exciting the brain centers, causes constriction of the internal vessels, and dilation of the superficial. Now, small doses of alcohol, as I have already pointed out, excite the medulla, and should tend to dilate the superficial and constrict the splanchnic vessels. This effect is obtained in animals if certain precautions are taken with regard to keeping the medulla as normal as possible, and giving only a small dose of alcohol, and that for preference by the mouth; it is the effect which is generally observed in man. It might be suggested that the alcohol was quickly oxidized in a useless fashion, and produced a sudden output of heat, and so dilation of the skin vessels. This is not the case, for we know that alcohol is oxidized as it is required by the body, and may be substituted in a diet, isodynamically, for starch or sugar.

(*d*) *Action on Blood-Pressure.*—No observations on the action of alcohol show greater discrepancies than those dealing with blood-pressure. These may, possibly, be explained by the very different conditions under which the various experiments were conducted. Those of Zimmerberg, Dreser, and Abel, were performed on anesthetized animals, and, on the whole, agree with one another, the main effect being a fall of blood-pressure. Experiments on anesthetized animals can not be regarded as showing the exact action, and especially would anesthetics hide the delicate effects produced by alcohol as a food substance, on account of their known action on metabolism. Another error is the tendency of observers to give excessive doses of alcohol. Thus, Gutnikow says that alcohol produces a fall of blood-pressure in the curarized dog, but to produce this effect he administered two hundred and fifty grammes of fifty to seventy per cent alcohol, and does not mention the weight of his dog. The majority of observers state that small doses of alcohol cause some rise of blood-pressure, and some that this is followed by a more considerable fall. Dogiel and Cerna did not employ anesthetics in their experiments. They describe an increase of blood-pressure. Schafer has shown how very decidedly alcohol acts in preventing the fall of blood-pressure caused by chloroform.

The present experiments were performed on cats, dogs and rabbits. Anesthetics were not usually administered, but the animals were in each case killed by pithing, the cerebral hemispheres being completely destroyed. In some cases the medulla was destroyed, and in others, especially in experiments dealing with vasomotor phenomena, it was kept intact; in the latter case the animal's respiration was natural.

Large injections of alcohol into a vein cause an immediate fall in blood-pressure. As soon as the heart is acted upon by the concentrated alcohol, the muscle fibers lose their power of contractility, and the organ becomes gorged with blood, but as the alcohol becomes diluted the force of systole increases, and the blood-pressure rises again. This initial fall of blood-pressure is due to cardiac failure, and is analogous in every way to that caused by chloroform. It is, however, of little significance practically, since the enormous amount of alcohol necessary to produce this effect is such as never occurs in life.

A further series of experiments on pithed rabbits, cats and dogs was made, in which the alcohol was placed directly in the stomach by means of a tube. In some of these cases curare was given. In all cases this method of administration resulted in a decided action on the circulatory system, and especially was this the case when the circulation was failing, as is apt to happen as the result of collapse,

some hours after the destruction of the brain. When absolute alcohol is placed directly in the stomach there is an immediate rise of blood-pressure, which passes off in two or three minutes. This is a reflex effect, and does not occur if the medulla is destroyed, nor if it is fatigued by morphine or other anesthetics.

Alcohol, no matter how it is administered, causes a small rise in pulmonary pressure. The systemic pressure is but little affected, yet the pulmonary pressure is distinctly raised. At this point the similarity between the action of alcohol and that of sugar on the blood-pressure may be pointed out.

The blood-pressure is the resultant of the output from the heart, and the condition of the vessels, as a whole. The cardiac output is increased, and the sum-total effect on the vessels is rather towards dilation than constriction, so that the blood-pressure may either rise or remain constant, according to which of these two factors holds the balance. But there is one effect which is seen fairly constantly in the blood-pressure tracing, even when the systolic pressure is unchanged, that is, the increased difference between systolic and diastolic pressures; this effect is also seen after the injection of sugar. In man, the same condition is expressed by saying that the systolic pressure is a little increased or constant, whilst the diastolic pressure falls. Indeed, the conditions of the circulation of man, under the influence of alcohol and in the normal state, as shown by his blood-pressure, present considerable analogies to his blood-pressure in the recumbent and standing positions, respectively. In other words, alcohol facilitates the circulation. I do not, however, wish to dogmatize as regards man, as my experiments are confined to two subjects.

My experiments and observations show that:

1. In moderate doses, and if well diluted, alcohol has little effect on the rate of the normal heart; in large doses it excites the medulla and slows the heart through the vagus. The failing heart is accelerated by alcohol. When taken by the mouth, in concentration, alcohol reflexly quickens the beat.

2. In moderate doses alcohol causes dilation of the superficial vessels and some slight constriction, which, after large doses, is followed by dilation of the internal organs' vessels.

3. In moderate doses alcohol increases the activity and output of the heart. Reasons are given for suggesting that this effect is due, in whole or part, to the fact that alcohol is a readily assimilable food-substance. In large doses, strengths over 0.5 per cent in the blood, alcohol depresses the heart. This is due to the toxic action of the drug.

4. Alcohol, in moderate doses, administered to animals which show signs of circulatory failure, raises blood-pressure, mainly on account of its effects on the heart. In normal animals, and in man, whilst the systolic pressure may rise a little or remain unchanged, the diastolic tends to diminish; in other words, the difference between the systolic and diastolic pressure tends to increase.

To sum up the conclusions with regard to the General Action of Alcohol in Health and Disease, the following facts may be safely stated:

Alcohol is rightly regarded as a circulatory stimulant. In the feebly-beating heart, or exhausted heart, its effect is very decided, and the condition of the beat, in both cases, is much improved. When it is allowed to act upon the heart in a healthy condition its effect is less decided, though in this instance, also, it is a stimulant—that is to say, the heart pumps out more blood per minute.

How does alcohol produce this effect? It may improve the beat by directly exciting the heart muscle, like preparations of digitalis, or it may act by providing a readily assimilable source of energy. We believe it acts on the heart as on other tissues, by providing it with an emergency food-stuff. Hence, its beneficial effect in the wasting diseases of children, in certain forms of heart disease, and in any condition in which, owing to an improper digestion, the circulation of sugar in the blood is interfered with.

Alcohol is popularly regarded as a stimulant to the brain—that is, a substance which increases the activity of the brain-cells. Is this view justified by experiments? All our reliable evidence shows

that moderate doses, an ounce to an ounce and a half of pure alcohol, or two or three ounces of whisky, have very little effect on mental activity; and the higher elements of mind, such as attention, judgment, and control, are, at most, only very slightly excited. Certain of the elements of mind are depressed, however, by even such small doses of alcohol as these.

The appreciation of unpleasant impressions is weakened so that, for example, sorrow becomes less acute; at the same time a general feeling of well-being pervades the individual. Larger doses of alcohol, five or six ounces, depress the higher or controlling centers of the brain, and, as a result of the lack of control, the lower centers exhibit an increased activity.

It is this lack of control of the lower brain centers which causes the excitement, and is commonly regarded as the stage of stimulation. It is a stimulant, but it affects only the lower centers, such as those dealing with movement, and not those of judgment and control. After such relatively large doses of alcohol man shows greater self-confidence, is more talkative, and less shy.

The emotional side of his character is especially well developed; thus, the jovial man becomes hilarious, the choleric pugnacious, etc., and it is, presumably, to this state that the Psalmist, David, in recounting the benefits of Providence, names "Wine that makes glad the heart of man." We believe that the pleasure of intoxication is due to this exuberance of emotion.

This explanation of the action of alcohol on the brain, that even in quite small doses it exerts a sedative effect on certain of the highest centers, such as the just appreciation of unpleasant associations, and, in larger doses, depresses judgment and control, is the one generally accepted.

The constant activity of our highest functions, though they yield most, fatigue us most, and especially is this the case in those of us endowed with vivid imaginations and hypersensibility of all kinds. In such conditions alcohol affords an easy remedy for mental fatigue. After the toil of day, exacting duties, the friction and hurry of life, mental tension and over-wrought nerves, alcohol may be beneficial, even to the highest faculties.

To take a stimulant for the relief of pain is, of course, nonsense; we but excite the brain to better appreciation of the painful sensation. A sedative, like alcohol, by diminishing appreciation of pain, is more rational in such conditions. Again, when our intellectual centers have been unduly excited and sleep becomes difficult, alcohol may produce just sufficient sedation to relieve this condition. In a word, for any condition requiring a mild sedative, alcohol is the least harmful of all drugs.

One other serious objection which has been made against the use of alcohol as a beverage, must be mentioned. It has been stated that it causes a diminution in our power of resistance to disease. This it is said to do by paralyzing tissue cells, more especially the white blood corpuscles, or scavengers, of our blood.

Alcohol, in large doses, in common with many other drugs, such as quinine and sodium salicylate, certainly has this action, and especially is this the case if it is injected under the skin, so as to reach the circulation in concentration; but alcohol, in small doses, just as certainly has the opposite effect, that is to say, it increases the activity of the white-blood corpuscles and other tissue cells, and augments our resistance to tubercle and other diseases.

These are the main facts concerning the action of alcohol. In moderate doses it is completely oxidized in the body, and under certain conditions serves as a useful food, and a valuable cardiac stimulant. In larger doses it has a toxic effect on the brain, which shows itself in sedation of the highest centers, and stimulation of the lower, but to call alcohol a poison, as this term is accepted in common parlance, without qualification or explanation, is a statement likely to deceive no one. At the same time alcohol is not a necessary article of diet for the healthy adult, and to the young it may do serious harm by creating a habit.

CARLYLE truthfully says: "If time is precious, no book that will not improve by repeated readings deserves to be read at all." We claim that repeated readings of the BRIEF will fully compensate the reader.

[Written for the MEDICAL BRIEF.]

Colles' Law and Its Exceptions.

BY GEORGE OGILVIE, B. SC., M. B. (EDIN.), M. R. C. P. (LOND.),
Chevalier de la Légion d'Honneur;
Senior Physician to the French Hospital, London:
Senior Physician to the Hospital for Epilepsy and Paralysis, London.
London, England.

No. II.

As I have previously pointed out, the statement made by Colles that he had never seen or heard of a case in which a healthy mother had contracted syphilis by suckling her congenitally syphilitic child, has been raised to the rank of a law, which goes by his name. It enjoys, up to the present day, universal recognition in the teaching of this country. Our authorities agree that it holds good, without exception. Berkeley Hill said that "This statement of Colles, made forty-four years ago, has never been controverted. Of the few cases called exceptions, not a single one bears investigation." Hutchinson said, "Since Colles' day no exceptions to his law have, I think, been put on record, which are worthy of trust." In the last edition of Cooper's book we read that "A careful examination of these cases —brought forward as exceptions—will demonstrate that, owing to want of very vital points in the recorded histories, the evidence rather tends to support Colles' law than to refute it."

A complete collection, with analyses of the cases, published as exceptions, does not exist. So far as I have been able to ascertain, their number is twenty. They differ in completeness, but some amongst them seem to me as conclusive as any clinical facts can be.

Cases such as these must be rare, even if the fact which they establish were of more frequent occurrence than it seems to be. To give them the conclusiveness which they possess, several conditions have to be fulfilled, which, for obvious reasons, can not often all be substantiated in an individual case. These conditions are the following:

1. The previous disease of the *father* has to be established.

2. It has to be proved by *medical evidence* that the disease of the child is syphilis. All cases have to be dismissed in which the previous history of the child, as regards symptoms, rests upon the evidence of relations, etc., because some non-syphilitic diseases of infancy closely resemble congenital syphilis.

3. It must be established that the disease of the child is *congenital*, and not acquired. In this respect we have only one, but an all-important point for guidance, the time of the appearance of the disease in the child, as the primary sclerosis might be missing or overlooked, and, as in every other respect, the acquired disease might closely mimic the congenital form. But even suppose that the child is infected at the day of its birth, taking for the first and second incubation the first shortest possible intervals of two weeks and three weeks, respectively, it could not present a syphilitic skin eruption, and an affection of the mucous membrane of the mouth, due to acquired syphilis, before the sixth week. Therefore, only those cases can be accepted as conclusive in which the general syphilitic disease of the child appeared within the first five weeks. Practically, however, the outbreak of secondary symptoms, up to two months or more after birth, can be attributed to the hereditary form of the disease.

4. It must also be certain that the ulcer appearing at the mother's breast is a *primary* sore, and here, again, we have only one criterion to rely upon, viz., that the indurated ulcer is followed in due time, not only by glandular swellings in the axilla, but by a rash, throat affection; in fact, by the ordinary sequelæ of the disease. It is well known that in people with latent syphilis, irritation of the skin may produce ulcerating sores. These sores may become indurated, as is the case, for instance, in the relapsing chancre, which, although occasionally appearing without any appreciable cause, might follow irritation or herpes of the prepuce. Therefore, the fact that the ulcer on the mother's breast is indurated, does not, in itself, prove its primary character, any more than the want of induration would disprove it. Swollen glands in the axillæ might follow any ulcerative process of the mammæ, whether syphilitic or not,

and if syphilitic, whether primary or not. The incisive difference between the irritation ulcer and the primary sore is that the former is not followed by secondary symptoms.

5. We have further to ascertain that the mother has not suckled any other child than her own, nor been exposed to contracting the disease from any other source. About these two points, in private practice particularly, information can be obtained which is not subject to any reasonable doubt.

That these conditions should all be fulfilled in the same case must evidently be rare. If it happens, an exception to Colles' law is established.

But, from another point of view, also the comparative scarcity of conclusive cases is easily explained. I do not think that any one nowadays doubts that a child affected with congenital syphilis may communicate the disease to a healthy wet-nurse by suckling, but about the frequency of this occurrence the greatest diversity of opinion exists. It appears that Colles considered accidents of this kind by no means rare. Continental syphilographers have described epidemics of the disease, spread in this way. On the other hand, a man of such large experience as Henoch, confesses to never having met with a case. According to Hutchinson, syphilitic infants, when put to wet-nurse, so rarely communicate the disease that some surgeons to lying-in hospitals, with very large opportunities for observation, have expressed disbelief as to its possibility.

This discrepancy can not be satisfactorily explained by the fact alone that in different countries, and in the same country, at different times, the proportion between children brought up by hand and those brought up at the breast shows great variations. It is partly accounted for by the circumstance that the syphilographer's experience must, necessarily, be at variance with that obtained in lying-in hospitals, children's and foundling hospitals. A collective investigation, embracing the institutions just named, could alone settle this open question, which the experience of no single man, however vast it be, can satisfactorily answer.

If infection of a nurse by suckling is rare, and if the above conditions have to be fulfilled to establish conclusive cases of infection of a mother by her own child, their comparatively small number is fully accounted for. Their number would, probably, be larger if the opportunity of closely watching mother and child for several months, in hospital practice at least, would offer itself more frequently; and it would be still larger if some cases had not been excluded, and been put down to acquired syphilis in the child, only for the reason that those who had not been given the chance of observing them were imbued with the teaching of Colles.

If Colles' law were valid it would have an important practical, as well as theoretical bearing. If it is only the expression of the personal experience of some at variance with that of others, the practical, as well as the theoretical, conclusions fall to the ground.

Practically, Colles' law teaches that the healthy mother can suckle her own congenitally syphilitic child with impunity. The so-called exceptions teach that she can not do so, and that, therefore, she, no more than a hired nurse, should be allowed to expose herself to the risk which she might run. In some particular case it may be justifiable to put a congenitally syphilitic child to the breast of a healthy wet-nurse who has been informed of the danger she runs. So it may be justifiable, occasionally, not to prevent a healthy mother from suckling her syphilitic infant. In cases of this kind, a conflict of various interests exists which can not be settled on purely medical lines. Moral, legal and sentimental considerations determine the decision to be arrived at. From a medical point of view, no justification exists.

The *theoretical* consequence of Colles' law would be that a mother who has given birth to a syphilitic child is immune against infection by it, although she has no symptoms of the disease, and never had any. This immunity has been regarded as proving the existence of latent syphilis in the mother. With what we know now on the relation between disease and immunity, such an argument is not admissible. In fact, the present phase of bacteriological knowledge seems to

readily offer a theoretical explanation, drawn from analogy. If the normal placenta represents a filter between the circulation of the mother and that of her child for all formed substances, the passage of microbes from one circulation to the other through the placenta (at one time regarded as impossible, but now definitely proved), presupposes damage to the cell layers. On the other hand, the noxious effect of the toxins produced by the organisms and carried by the blood, might pass from one circulation into the other by chemical interchange. Applying this to the question of transmission, one might argue that infection only takes place through the microbes and the lesions they cause, while the immunity is established by the toxines and their diffusion through the blood. Simple and plausible as such an explanation might sound, it is mere speculation, and at the same time insufficient, because, apart from other things, it leaves unexplained those cases in which neither infection nor immunization takes place.

Such cases occur, not only in syphilis, but also in other transmissible diseases. The child born healthy of a mother affected with small-pox, can contract the disease during parturition, or in early extra-uterine life, and must, therefore, be protected by vaccination. Vaccination of pregnant women with vaccine lymph produces immunity in the child against vaccination in, at most, only one-third of the cases.

Transmission of small-pox from mother to fetus is of erratic character. The child may be born dead, with or without small-pox. The child may be born alive with small-pox. The child may be born apparently healthy, and develop small-pox shortly after birth (say two days); in this case, also, the disease was contracted in utero. The child may be born healthy, and either remain healthy or contract small-pox in extra-uterine life; in the latter case it nearly invariably dies. To protect it it has to be vaccinated, which can be done successfully. The child may, during an epidemic, contract small-pox in utero, the mother, who was vaccinated previous to gestation, escaping. Of twins one only may be born with small-pox.

It seems that while intra-uterine transmission of small-pox is by no means rare, intra-uterine immunization seldom, if ever, takes place. The two antagonistic statements to be met with, that if a pregnant woman suffers from small-pox her fetus will also be affected, and that the child is always born free from the disease, are both wrong. They are merely expressions of personal experience and knowledge. Small-pox occurring during pregnancy is, in a large percentage of cases, instrumental in producing abortions and still-births. In the majority of such cases the fetus shows no signs of actual or past disease. Still, eruption or scars indicating intra-uterine infection, may be found on the dead fetus, as well as on the living child at the time of delivery. The child, if born free from the disease, and remaining healthy, is neither refractory to small-pox nor to vaccination.

A certain liking for symmetry, and the rounding of theories has, evidently, given rise to the extraordinary pendant to Colles' law, which is known abroad as Profeta's law, and which says that a child born healthy of a syphilitic mother is immune against its mother's disease, and can, therefore, be suckled by her with impunity. Going a step further, it has been contended that a healthy child is immune against infection by the secondaries of its father, if the later was syphilitic at the time of generation. That exceptions to Profeta's "law" exist was admitted by him, and also by Diday, when the latter gave the law its name. Since that time other observers have brought forward exceptions. In fact, I am not sure that they are less in number than those examples which might be adduced to support this so-called law. Anyhow, we know that a healthy child born of a syphilitic mother can contract syphilis from her in its extra-uterine life, and it naturally follows that the child has to be protected against this possible source of infection. That, in face of these granted facts, one could act and teach others to act upon the rule, affords a remarkable instance of conviction obscuring judgment.

It is possible that within certain limits Colles' law and its pendant express a clinical fact, viz., that under unknown conditions, during gestation, a reciprocity is

established between fetus and mother with regard to conveying immunity. The frequency with which this takes place has still to be found. But whatever the proportion may turn out to be between those cases which at present are considered exceptional and those cases which would exemplify the rule, our practical dealing is determined by the former. The practical consequences of the law break down since the exceptions are established. To ignore the exceptions or disprove them, and act upon the rule, is one thing. To accept the exceptions, and put aside the rule, is another thing.

In accordance with the actual wording of Colles' law I have restricted myself to the consideration of cases where the source of the mother's infection was her own child. No facts exist to show that a mother, immune against her child's disease, can still contract the disease from other sources. Granted that immunity against the child's or the mother's disease, respectively, means immunity altogether, then the rules referred to can, in a more concise form, be thus expressed:

1. A healthy mother, who has given birth to a congenitally syphilitic child, is immune against syphilis.

2. A healthy child, born of a mother suffering from acquired syphilis, is immune against syphilis.

With regard to this wider conception of what is understood as Colles' law, its fallacy is still more completely shown by those cases in which the mother of a congenitally syphilitic child contracts fresh syphilis shortly before or after delivery. Against this positive evidence the few negative inoculation results have no weight.

All the exceptions to Colles' law, in its wider sense, are conclusive examples of a purely paternal infection of the fetus, presenting the following features: Acquired syphilis in the father, congenital syphilis in the child, acquisition of syphilis by the mother shortly after delivery.

How WELL Alcott represents our journal when he says: "That is a good book which is opened with expectation and closed with profit."

[Written for the MEDICAL BRIEF.]

Gastric and Duodenal Ulcers.

BY VINCENT F. LENNANE, L. R. C. P., L. R. C. S. (EDIN.) AND L. M. (GLAS.).
Late Colonial Surgeon, Gold Coast.
London, England.

It is said that ulcer of the stomach is much more common in Great Britain than in the United States of America. This is an assertion difficult to prove or to disprove, for the mortality in this disease is small, and there are no statistics available of cases of illness which do not terminate fatally. The only reliable information would be obtained from noting the number of scars of ulcers which could be discovered at the autopsies of people dying of other complaints, and even this would be open to many sources of fallacy.

It is said, too, that gastric ulcer is much more common than duodenal ulcer, and this is undoubtedly the case. In London we get an enormous number of cases of gastric ulcer in young girls who are in domestic service. Why this should be so it is difficult to explain; they are comfortably housed, they are well fed, and, as a rule, they are not overworked. Many of them, it is true, are anemic, and anemia is, apparently, the starting point of the gastric trouble, but why their red corpuscles should undergo a diminution in number is equally inexplicable. In clerks and shopmen of the same age, and drawn from the same class of society, anemia is rare, and gastric ulcer is, practically, unknown.

Gastric ulcer is most common in girls between the ages of seventeen and twenty-six, whilst duodenal ulcer is the heritage of men between thirty and forty. What is it that determines the site of the peptic ulcer, and why in women should it be on one side of the pylorus, and in men on the other? Men, on the whole, take more in the way of stimulants than do women, but alcoholism is not a cause of duodenal ulcer. Men are tobacco smokers, but there is absolutely no proof that nicotine and its products are eliminated by the mucous membrane of the intestines. These circumstances are clearly not the clew to the mystery, and the explanation has yet to be found.

Of one thing I am certain, and that is that ulcer of the duodenum is far more common than is usually supposed. I say this, not only as the result of my own experience, but from comparison of notes with many physicians attached to our leading hospitals. The fact is that duodenal ulcer is frequently overlooked, for the symptoms are by no means characteristic. In the absence of hemoptysis, and this is by no means a constant symptom, there is often very little to point to this condition. There are the ordinary symptoms of dyspepsia, and, possibly, of peptic ulcer, and there may be some tenderness on the right of the abdomen, but this can hardly be regarded as conclusive evidence. Again, hematemesis may be produced by a variety of morbid conditions. It is not uncommon in cirrhosis of the liver, it may be secondary to cardiac mischief, and it may be the expression of some perverted state of the blood, such as that met with in that peculiar group of symptoms named after Banti. It is probable that an acute attack of hematemesis occurring in a man over forty is due to duodenal ulcer, but more than that we can not say.

The symptoms of duodenal ulcer are practically identical with those of gastric ulcer, as given in our text-books. It is true that in duodenal ulcer, melæna often appears when there is no vomiting of blood, but in other cases, just as in gastric ulcer, hematemesis is the first symptom to attract attention. The hemorrhage may be internal, and the first indication may be given by the onset of a grave condition of collapse. The symptoms of peptic ulcer, that is to say, those common to both these varieties of the disease, may be briefly summarized.

The pain is brought on by the ingestion of food, appearing from an hour to two hours after a meal; it continues until vomiting takes place, by which it is relieved, or it subsides as the food leaves the stomach. It is pressing, boring, tearing, or burning, and more severe than in any other gastric disorder. Sometimes there is pain in the back, between the dorsal and lumbar vertebra. The vomited matters may be the gastric contents, but, in some instances, blood is exuded in small quantities mixed with the contents of the stomach, the hemoglobin being converted into hematin by the acid gastric juice, so that the vomited matter has the turbid, blackish-brown appearance which is compared to coffee grounds. The blood may be extravasated in large quantity at once; that is, it is vomited, unmixed with gastric contents. The patient feels faint, has a sense of oppression in the epigastrium, and in a few minutes vomits the blood, which may amount to two, or three pints. It is dark from contact with the gastric juice, but if flowing from a large artery may retain its arterial brightness when evacuated. Some of the blood discharged into the stomach finds its way into the intestine, and is ultimately passed per rectum, in the form of black, treacly, or tarry motions; these may be passed long after the hematemesis has ceased. The vomiting of the blood may be fatal; often it ceases entirely, and may not be repeated for months or years. Anemia and weakness result from the loss of blood.

The continued pain, the defective assimilation of food from vomiting and the loss of blood impair the general condition, sooner or later. There is no fever, the tongue is clean, and the appetite is good. Constipation is frequent. Examination of the abdomen reveals nothing; there may be some hardness, or tenseness of the abdominal walls. Only in the case of old ulcers with much thickening, or adhesion to other organs, can a tumor be felt; or, if pyloric stenosis results, the dilated stomach may be recognized. Patients with hematemesis show a characteristic pallor, with hemic murmurs over the precordia.

The complications of duodenal ulcer are numerous. Amongst the most serious of these is hemorrhage, which may result from erosion of an artery or of a vein. The actual aperture, even when a big vessel is involved, may be small, so that at the autopsy it has to be looked for with care. The effects of a profuse attack of bleeding are serious, and the patient may pass into a critical condition, even in a few minutes.

Another complication is peritonitis, but as long as this is localized and confined to the base of the ulcer, it is not likely to

do much harm and probably will not spread.

When perforation takes place it is a much more serious matter. It may happen that the duodenum has become adherent to some other portion of the intestine, and if the lesion occurs at the point of union a "bimucous fistula" is formed, which is a happy solution of the difficulty. As a rule, however, perforation takes place into the general peritoneal cavity, and the symptoms are both grave and urgent. There is a sudden and severe pain in the abdomen, and the patient presents all the symptoms of collapse. The abdomen may be distended, but may be retracted from spasm of the muscles of the abdominal wall.

Tympanitis is common, and, as a rule, the liver dullness is absent. The temperature rises to 102° or 103° F., and the patient's face wears a look of intense anxiety. General peritonitis is set up, and, unless prompt surgical treatment is resorted to, the prospects of recovery are small. Sometimes, as a result of the perforation, a subphrenic abscess is formed; that is, there is a collection of pus in the hollow of the diaphragm. If the perforation is free there may be an exudation of gas and pus into the peritoneal cavity. The pus in the subphrenic abscess may perforate the diaphragm, giving rise to an empyema which may ultimately point in the groin, or in some far-distant part of the body, such as the popliteal space. When both gas and pus accumulate in the pleural cavity, we have a pyo-pneumothorax.

Another complication of peptic ulcer is *ulcus carcinomatosum;* that is, the simple ulcer takes on a malignant form. Such cases are rare and authorities tell us that since 1845 only thirty-two have been reported. The onset of this condition is usually indicated by a sudden rise in temperature. In a very short time constitutional symptoms supervene, and the patient shows signs of cachexia, with loss of flesh. These are the usual symptoms, indicating that some complication has arisen; but there may be others, the exact nature of which can only be inferred by clinical experience.

With regard to diagnosis, I am inclined to say that it is not possible, in every case, to distinguish between gastric and duodenal ulcer. I rely, however, chiefly on these points:

1. Duodenal ulcer occurs, chiefly, in men and in men of middle age.

2. The pain is experienced chiefly on the right of the duodenum.

3. The pain is delayed until some hours after food has been taken.

4. The vomited matter is alkaline, and contains bile and digested fibrin.

5. Melæna is more common than hematemesis.

I would add one word of warning, and that is not to mistake the gastric crises of locomotor ataxy for peptic ulcer.

The treatment of duodenal ulcer does not differ materially from that of gastric ulcer. In a bad case, especially if there is much hematemesis, or melæna, I should keep the patient strictly in bed, and feed by the rectum only, giving nutritive enemata, not exceeding four ounces every four hours, with a cleansing injection twice a day. The enemata should consist of milk or beef tea, with or without the addition of fifteen drops of tincture of opium. I should avoid stimulants. In many cases, nutrient suppositories, consisting of beef peptones, are useful. If the hemorrhage is abundant, the patient should be kept in a strictly recumbent position, and in a cool room. Astringents may be given, either by the mouth or rectum.

The most useful drug in these cases is bismuth, and the best form in which to give it is the carbonate. It is insoluble, is not changed in the stomach, and much of it passes up the intestine, where it forms a protective coating to the ulcer. To produce the effect, however, the drug must be given in very considerable doses, such as from one to three drachms three times a day.

Another remedy, at one time a favorite, but now comparatively rarely used, is oxalate of cerium. There is no evidence that it is absorbed, and any beneficial effects which may accrue from its use are probably due to a local protective action on the gastric mucous membrane.

Hydrocyanic acid, although used in gastritis and various neuralgic conditions of the stomach, is not likely to do any good in duodenal affections, as it clearly would not reach the site of the mischief. The

action of pepsin is confined pretty much to the stomach, and although of value in atonic dyspepsia, can not exert any beneficial influence on an ulcerated mucous membrane.

In conclusion, a word about the surgical treatment of peptic ulcers. It is the fashion, nowadays, to treat everything surgically. I have the greatest respect for the skill of our operating surgeons, but it must be admitted that their cases, sometimes from failure of antiseptics, and sometimes from apparently unavoidable causes, go wrong. I should never think of requisitioning the services of a surgeon in a case of gastric, or duodenal ulcer, except when a profuse hematemesis involved the life of the patient, and even then I should hesitate long before consenting to an operation. The opening is so small, the point of hemorrhage is often so difficult to detect, the danger of collapse is so great, that I prefer to trust to medical means in the great majority of cases, and not to sacrifice what small hope there may be of recovery. I quite admit that this view of the subject may not meet with universal acceptance, and that the triumphs of surgery are great. The responsibility of the physician is great, and I do not envy the position of the medical adviser who, perhaps, unaided and at a moment's notice, has to decide a question which is one of life or death to his patient.

[Written for the MEDICAL BRIEF.]

Query From India.

BY LAL N. MANGAN, M. D.,
Raipur Ward, Vad-ni-pole.
Ahmedabad, India.

In your issue of June, 1907, you give a good cure for snake-bite, with alum. I request you to let me know if alum has any effect upon scorpion bite. If not, why so? Please give some good and effective treatment for scorpion bite, as scorpions abound here. Another question that I would like to have answered, Is a lizard a poisonous reptile? Can you supply any certain treatment for the plague?

[If any of our friends can give replies to above we would be pleased to hear from them.—ED.]

[Written for the MEDICAL BRIEF.]

Absorbable Versus Non-Absorbable Suture Material When Sutures or Ligatures are to Be Buried.

BY CARLTON C. FREDERICK, A. M., M. SC., M. D.,
Clinical Professor of Gynecology in the University of Buffalo.
Buffalo, N. Y.

Before the time when catgut could be certainly and safely sterilized so as not to impair its tensile strength, it was absolutely necessary for the surgeon to have recourse to non-absorbable suture material, because the constitution of these was such that they could be sterilized by boiling. But since processes of various kinds have been devised whereby catgut can be rendered absolutely sterile, and at the same time not interfere with its tensile strength, there remains no reason why non-absorbable suture material should be buried, in preference to absorbable suture material. Catgut can also be chromicized, and at the same time so sterilized that it will endure in the tissues for any period of time that the surgeon may desire or require of a suture material. These facts being now positively proven, there seems to me no real reason why catgut, in some of its various preparations, is not preferable to silk, silkworm gut, silver wire, or any of the other many materials used.

It has been claimed by some that catgut is unreliable as a suture or ligature material because it can not be securely tied and depended upon. That depends entirely upon how the suture is tied and how short the ends are cut, after the knot is made. Catgut can not be tied as silk or any of the textile fibrous tissues are tied; it must be tied by a single knot at first, and then one double knot or two single knots, the ends of the suture being left at least one-half to three-quarter inches long. The writer has never seen a catgut ligature to untie or slip when so used.

Suture or ligature material is placed simply for the temporary stoppage of hemorrhage, or to approximate the parts that are sewed. Ligature material does not need to hold a vessel longer than six to eight days. Suture material does not need to remain *in situ* longer than two

to three weeks, therefore plain catgut may be used to tie vessels. Only in closure of abdominal wounds is it necessary to use chromicized gut.

To those who object to the use of catgut, those who have had an experience of years in its use can only say, in reply to their criticisms, that they do not know from a large enough experience how to handle catgut. It has been the writer's experience, at least two or three times, and sometimes oftener each year, to go on a hunting expedition at various points in the abdominal cavity for infected non-absorbable suture material which has been left by some surgeon of repute. Within the past month an abscess containing a silk ligature about the left fallopian tube was opened, this abscess had been draining periodically into the woman's bladder for a period of three years, and prior to this operation there had been removed through the posterior vaginal fornix two silk ligatures, and three had come out through the lower angle of the abdominal incision. This is not an unusual experience and observation of the writer, consequently he feels that silk, celluloid thread, silkworm gut, silver wire, etc., have no place as buried suture material in any part of the abdominal cavity, except in the gastro-intestinal tract. He does make exception to that part of the abdominal cavity, for in the gastro-intestinal canal silk and Pagenstecher thread may be used freely without any serious after-results, because the intestine will invariably throw the suture material into the lumen of the gut rather than into the peritoneal cavity, and it is eventually carried through the bowel with the feces and discharged, leaving no ill-results.

Catgut may be rendered absolutely sterile by the iodin method, by the dry heat sterilization, and other chemical processes. The author's preference is the process by immersion of the gut previously wound and tied upon glass spools in a three per cent solution of formaldehyde for a period of three hours for the smaller sizes, and four to six hours for the larger sizes, then washed in running water for from four to six hours. The catgut may be thrown into water raised to the boiling point, and kept at that heat for at least half an hour, then removed into sterile containers with ninety-five per cent alcohol and a little glycerin added thereto until ready for use.

If the surgeon desires that his catgut shall not only be aseptic, but also antiseptic, he may remove it from the plain alcohol and glycerin solution a month before its use and place in a solution of iodin in ninety-five per cent alcohol in the strength of one-half to one per cent. The gut will absorb the iodin, so that when he has placed it as a buried suture it will slowly give up its iodin and sterilize the suture tract, thus preventing the growth of colonies of bacteria in the dead, although still sterile, material.

If chromicized gut is desired, the gut can be placed in a solution of bichromate of potash or bichromate of soda, three grammes to one litre of water, to which is added twenty cubic centimeters each of carbolic acid and glycerin. In this the gut may be left for twenty-four hours, then thoroughly washed for twelve to twenty-four hours in running water and sterilized, as before described; thereby a gut is obtained which will remain in most tissues from two to three weeks before absorbing.

The author feels so strongly, as a result of his experience, both personally in his earlier surgical career and from those cases which he has seen where patients have been sufferers because of the use of non-absorbable suture and ligature material, that he feels that too much can not be said to induce the younger surgeon, early in his operative career, not to try silk or other materials in preference to catgut and kangaroo tendon.

61 Richmond Avenue.

Poison Oak or Ivy.

A California subscriber writes us that there are many cases of the above in his surrounding country, and asks that we request the readers of the BRIEF for articles on this subject, bringing out the ideas and treatment for the same. We hope that some one will oblige us with a contribution of this kind.

[Written for the MEDICAL BRIEF.]

The Crying Need of Better Therapeutics in Brain and Cord Lesion.

BY AMBROSE C. STEWART, M. D.,
Professor of Neurology in the Westminster University Medical College.
Denver, Colo.

The profession stands appalled at its helplessness in the presence of most of the deeper pathologies of the brain and cord. Let us, for example, first consider with regard to the therapy of the chronic maladies. Whether they be membranous or periependymal.

From the allopathic standpoint we have iodide of potash in moderate doses. This in many cases offers us a valuable remedy if gastric disturbances do not arise, and if the case is not too severe, and the area involved is small, and the subject a good one. The cures, however, under the iodide of potash treatment are certainly not brilliant.

In the treatment of syphilitics I must say that I prefer the iodides to the mercurials. The mercurials, I believe, have a much narrower field in the spinal lesions of syphilitics than is usually supposed. Opium is sometimes used, but beyond its palliative effect little or nothing can be claimed for it, and it must be said with regard to all opiates that they are very apt to restrict dynamic resistance and render a cure more difficult.

Just what hope is held out by the use of ergot, or its field of action in deep lesions of the spine or brain I am unable to say; it has never appealed to me.

In silver nitrate we have a most valuable ally in not only staying the ravages of these diseases but in cutting short their course, and I believe in many instances the effect of silver nitrate in my practice may be said to have been absolutely curative. I use it in homeopathic potency.

The salicylates are valuable in some of our rheumatic cases, provided these cases are comparatively recent, and the destruction has not been too great.

As to the bromides: I ceased to prescribe them years ago, and candidly, I derive little comfort in contemplating the future of a case that presents even the milder manifestations of bromidism. Bromides certainly are undeserving the therapeutic fame once enjoyed. They will serve, however, as a short bridge to more rational therapeutic expedient.

In the acute lesions of the spine and brain I entertain serious doubts as to the efficaciousness of gold chloride.

Phosphorus is more extensively used among the old-school people than ever before, and, I think, with good reason. Its action is decidedly reconstructive in that class of cases in which it is indicated.

I am afraid of the use of strychnia where there is true pathology of the cord or brain unless we desire to create quick nerve stimulation and reaction. Its action is comparatively temporary.

Hyoscin can not be regarded as curative, but has a wide field as a palliative and nerve sedative. The homeopaths rely very largely upon five or six remedies. Aconite, where the indications are the swaying inco-ordinate movement; thirst, heat, shooting pains, involving the lower limbs. Anacardium, especially where there is pressure about the knees with a band about the waist, and the not infrequent *plug* symptom in the spine.

Belladonna presents the picture of the patient who has twitchings, distortion and spasms. He is apt to be wild and raving; there is paralysis of the sphincters, incontinence of the urine, and where the predominating symptoms are of a sensory character.

Zinc is the nerve tonic of the new school; sensation is not markedly effected. Toxicodendron, the rheumatic cases; there is tingling and decided disturbance of sensation.

Plumbum: Itching, drawing, shooting pains, resembling tabes, following the courses of the big nerves. Electricity in some form is nearly always applicable in these cases after the earlier symptoms have passed away, especially when wasting has set in. Galvanism over the site of the lesion, especially in inflammatory cases; faradism later on to nourish and stimulate. Of course, if the reflexes are very unstable we refrain from its use.

The treatment of these cases will depend very largely upon the source from which they arise. We must view them from the standpoint of tuberculosis, malaria, syphilis, rheumatism, typhoid fever.

In tabes can the anti-syphilitic remedies in general, be relied upon to even stay the disease? I firmly believe they can not be. If at all, they are most effective in the preataxic stage.

A few cases have been reported cured among the remedies given above, but we must consider that there are very often in these cases decided errors in diagnosis. The best authorities tell us that two years after the syphilitic symptoms have been clearly defined, the mercurials and iodides are of doubtful value. I believe that the mercurials are frequently decidedly harmful, the toxic action of this mineral upon the tissues that are already diseased can not be looked upon with complacency by the careful physician.

I fear the profession has not fully profited by the inquiry (Brauer's-Leipz, '97, and others) into the toxic action of the mercurials upon cornual and other nerve elements. Cautiously used, they have a curative range, but I should fear to assume the responsibility of saturating any patient with this permanent mineral poison.

The treatment of the old school has finally boiled itself down to "keep him quiet," "avoid all excitement." "Give a little silver nitrate, promise nothing." I would add, "avoid early morphinism." Nerve stretching, galvanism, faradism, and static positive spark make up the total.

The new-school man has a little the best of it here, perhaps, because he hews closer to the symptomatic lines, and hence gives more comfort to his patient. After all, the profession is to all intents and purposes in the position of the crew who have left the ship, and are standing by helplessly waiting for the final plunge beneath the waves.

What has been said of these conditions may be truthfully said of pretty nearly all of the deeper lesions of the brain and cord, and the efforts of the neurological world to-day should be bent untiringly and unswervingly to the discovery of effective therapeutic measures which would go hand in hand with the newer and better pathology of the brain and cord, constantly unfolding in response to the genius of the age.

612 Empire Building.

[Written for the MEDICAL BRIEF.]

Neuro-Deformities in Children.

BY JAMES W. COKENOWER, M. D.,

Professor of Orthopedic Surgery and Clinical Orthopedic Surgery in College of Medicine of Drake University.
Des Moines, Iowa.

It is generally conceded that nearly all deformities, especially in children, not traumatic or hereditary, are due directly or indirectly to some abnormal condition of the nervous system. This branch, like all other branches of medicine and surgery, bows with obedience to its *Alma Mater*, because we can not understand the anatomy, pathology, and histology of the nervous system unless we understand general medicine, and the laws of cell life and birth.

My experience as a general practitioner prompts me to admit that nothing is more important than the nervous system and its disorders, and yet there is nothing in medicine in which our knowledge is more deficient. In the investigation of even so simple an ailment as headache, the field of medicine must be well examined to know whether the real cause of the pain is a vicious, hereditary nephritis, lack of exercise, anemia, puberty, menopause, menstruation, masturbation, occupation, or one or more of the myriad of other influences or diseases, all of which it is necessary to know to cure a simple headache.

How much more then is it necessary for him who would successfully treat the nervous system, especially to that extent to obviate deformities produced by or through the nervous system, to know thoroughly not only the nervous system, but the entire human system, and everything that would hinder or augment its normal development. Unless we have such knowledge, we will still find ourselves treating apparent poliomyelitis or scorbutic rachitis for paralysis, torticollis for cervical adenitis, trismus for an erupting wisdom tooth, and the knee jerk for morbus coxarius. These being the deformities produced by abnormal changes in the nervous system. Ovarian deformities (if I may be pardoned mentioning the fact), which do not come under the scope of this paper, or any other in many in-

stances, would not occur if a better knowledge of the nervous system and its influence over each component part existed.

The remark once made by Prof. Jenner, that more mistakes are made by not seeing than by not knowing is not without a lesson, and helps to confirm the fact that more mistakes are made in diagnosis than in treatment. Next to the deformities produced by poliomyelitis or infantile paralysis are those produced by hysteria, which the consensus of modern writers on the subject has placed among the diseases of the nervous system, and which, by no means, is the most easily handled. I believe in the nervous being that a line of general treatment may be used that will lessen the chances of such deformities or mitigate against existing ones. For these the constitutional treatment must be looked after first, and the drugs used indicated by the specialization of the disease. Talipes, club-foot, wrist-drop, retro-lateral curvature of the spine, and, in fact, nearly all of the muscular deformities known to the orthopedic surgeon, may be produced by some nervous disease, and to undertake to cure the deformity by surgical means without first endeavoring to ascertain the real cause which produces the deformity, and treat same medicinally, would not be in keeping with the modern medical and surgical science of the day.

[Written for the MEDICAL BRIEF.]

Mechano-Therapy in the Treatment of Tuberculosis.

BY OTTO JUETTNER, M. D., PH. D., F. R. M. S. (ENGL.), ETC.

Professor of Practice at the "Cincinnati Post-Graduate School of Physiological Therapeutics;" Author of "Modern Physio-Therapy," a Text-Book of Drugless Therapeutic Methods.
Cincinnati, Ohio.

Massage of the Chest.—In order to understand and appreciate the therapeutic value of massage it is proper to acquire the manual dexterity which alone enables us to form any opinion as to the possibilities of mechanical therapeutic methods. To manipulate the muscles of the chest wall means to increase their blood supply, to develop them, to render them stronger and more active. This, in and of itself, means more vigorous respiration, especially if the mobility of the thorax proper has been increased. These effects should be aimed at in all cases of lung consumption, especially during the early stages. The *modus operandi* is subject to variation, owing to peculiarities of individual cases. In a general way the following suggestions will be found applicable to most cases:

The patient being placed in the dorsal decubitus, the operator begins the manipulation over the costal border, gently picking up between his fingers a fold of skin and subcutaneous tissue, lifting it from the bony structures beneath and gently kneading it between his fingers. Most patients will be found to be "hide-bound," the soft tissues of the chest wall being very tense and hard to raise. Eventually, *i. e.*, after repeated sittings, the fold of the skin will come up with comparative ease. This manipulation requires all possible patience and gentleness. Lack of delicacy would be worse than worthless. Gradually the manipulation is extended over the whole chest. This form of massage may be followed by gentle stroking in a horizontal direction. Each sitting should last from fifteen to thirty minutes, to be repeated after twenty-four hours. Within a week or two the muscles of the chest will be less tense and probably a trifle fuller. At this juncture exercise of the thorax might be begun. The operator places his flat hand over the right or left side of the patient's chest, making firm and gradually increasing pressure. The result will be a partial immobilization of a portion of the chest. If the patient is told to breathe deeply the effect on the unengaged side of the chest will be more or less intense. The patient will expand the unengaged side of the chest more than he would without immobilization of the other side. The operator may alternately place his hand on one and the other side. He may vary the procedure by placing both hands on the lower portion of the thorax, over the last three ribs, thus forcing the patient to expand the upper portions of the chest vigorously. In this way the expansive

power of the chest can be increased considerably, rendering inhalation of fresh air a therapeutic factor of prime value. In applying these mechanical methods to individual cases, much depends upon the judgment and the individualizing faculty of the physician. With proper care and judgment an immeasurable amount of good may be derived from manipulations of this kind.

General Massage.—In many cases of massage, especially before much impairment of general health has taken place, the invigorating effect of massage adds much to the comfort of the patient. Considering its effect on the circulation and, indirectly, on the metabolic functions of the organism, it is especially indicated in those cases in which weakness and marked exhaustion after comparatively little exercise or exertion are characteristic symptoms. Massage in these cases takes the place of muscular exercise and, if judiciously administered, is a very serviceable substitute. It should be given every day or two and never be carried to the point of irritation. Deep *effleurage* along the lymphatics of the extremities does well in cases in which symptoms of autointoxication are conspicuous, *e. g.*, headache, muscular pains, fatigue, insomnia, etc. General massage in and of itself is often sufficient to relieve these symptoms. It frequently prevents night sweats. Superficial massage should be avoided on account of its irritating effect on the skin nerves. All massage movements in cases of this kind should be centripetal, with a view of depleting the venus and lymphatic vessels. If the tendency towards hemoptysis is well marked more than ordinary discretion should be exercised in the carrying out of any mechano-therapeutic measures.

Gymnastics of the Respiratory Apparatus.—The tubercle bacillus would give us little concern if the body of the consumptive patient did not offer a splendid soil for its growth and dissemination. The colonization of the tubercle bacillus on and in the tissues of the patient is preceded by a period of preparation during which the tissues gradually become a suitable habitat for the germ. The process of preparation begins with neglect of the lung function. Inasmuch as imperfect lung function may be conditioned by inherited bad quality of the body, its parts, tissues and fluids, it may be said that the process of preparation frequently begins in the preceding generation or still further back. A wretched physique, small, flat chest, poor blood and other evidences of physical inferiority may be the heritage of a human being in whom the sins of his fathers are thus being avenged. Scrofula, tertiary or inherited syphilis, rachitis, and many other conditions of bodily wretchedness are the punishment which nature metes out to those who sin against fundamental principles of hygiene. The offender may be an individual, a family, a tribe, a race. The sufferer may be another individual, another family, another tribe, another race. To save the species nature gradually destroys the part. This is the biology of tuberculosis. Tuberculosis is not inherited *per se*, but all the conditions favorable to its development are. The moment the individual is born, the struggle for existence begins. If the weapons of defense are absent, the doomed victim of a progenitor's misdeeds succumbs. The fittest survives. This phase of the subject is an hygienic and economic problem which should be solved now, so that the countless unborn in the bosom of the future may live. It is a problem that will never be solved unless man, in the aggregate, returns to first principles of hygiene. This would be the crowning effort of civilization in its most exalted sense.

The habitat of the tubercle bacillus is not always inherited. Sometimes it is acquired, or even assiduously cultivated. The surroundings, the habits, the occupation of an individual, may prepare a suitable soil. Lung function may be neglected, resulting in a corresponding atrophy, shrinkage or degeneration of the lung and its container, the bony framework. The result would be deficient oxygenation of the blood and a corresponding deterioration of the quality of the whole system. The diminution of the amount of oxygen assimilated by the lungs leads to a gradual lessening in the number and quality of the red-blood cells. Thus the

resisting power of the system is constantly waning. Alcoholism and other bad habits may add their share to the general collapse. The soil is ready for the crop of hungry scavengers that are being carried in with every breath. The battle for existence has begun.

In these cases of incipient phthisis the therapy should begin at the seat of the trouble. The lungs should be developed, the chest wall be made to expand, the organism should receive its physiological share of fresh, healthy blood. This can be accomplished by strict enforcement of the hygiene of respiration by a rational system of lung gymnastics. Patients must be taught to breathe, and must be given the proper kind of air for this purpose. This is the philosophy of chest gymnastics in a nutshell.

A consumptive must sleep, eat, play, and live in the open air. He must under no circumstances be confined where the supply of fresh air is limited. This is rational therapy for the individual and effective prophylaxis for those whose health he imperils by contact. It is admitted on all sides that the prevention of infection is even a greater problem than the treatment of the individual patient.

Light, air and water are the victorious phalanx that never loses a battle against pathogenic organisms. They are, as L. F. Flick, of Philadelphia, Pa., correctly remarks, the natural enemies of the tubercle bacillus. Sunlight and air kill it, and water dissolves it out of its *cache*, so that light and air may get at it. The bacillus comes out of a host wrapped up in broken-down tissue, which serves as a *cache*. When this broken-down tissue is deposited in a house it dries and hardens, and the bacilli inside remain alive for a long time. When it is deposited in the open, it is dissolved, or becomes disintegrated, and soon becomes devitalized. This is why an enclosure of some kind plays such an important role in the propagation of tuberculosis. In an enclosure sunlight, air and water can not get at the tuberculous matter and it remains vital; out of doors sunlight, air and water do get at it, and it soon becomes sterile. Houses of one kind and another are the ordinary means of spreading tuberculosis. The home is the most frequent means and the workshop the next. This is so because it takes prolonged intimate contact with a person, place, or thing that has been intensely contaminated with tuberculous matter to give rise to an implantation. The home and the workshop are the two places where environment of sufficient intensity of contamination and contact of long enough duration for implantation, most readily can exist. Probably three-fourths of all cases of tuberculosis which are conveyed from person to person are contracted in the workshop.

With the importance of air as a prophylactic agent firmly fixed in our minds we are prepared to understand the meaning of *inhalation* as a therapeutic measure. To exhort patients to breathe deeply while walking in the open air is excellent advice, but not of much practical value, because patients usually tire of monotonous and irksome exertion of this kind. We must, therefore, resort to some other means of enforcing deep inhalation. Therein lies the therapeutic value of all inhalation methods, irrespective of the agent used (oxygen, ozone, medicated vapors, etc.). The value lies largely in the act of inhalation, not so much in the character of the substance inhaled, unless it is the normal physiological lung food, namely, atmospheric oxygen.

The inhalation of manufactured oxygen out of an oxygen tank is being advocated by some. Theoretically speaking, the inhalation of oxygen ought to be the ideal treatment of tuberculosis. It ought to, as it were, supply the missing link in the chain of vital elements which are antagonistic to the bacillus and its development. More especially ought this to be the case when the expanding capacity of the lungs is being increased by breathing exercises or by thoracic gymnastics. Clinical experience does not confirm this optimism of the theoretical physiologist. The absorption of oxygen is regulated by the physiological oxygen-carrying capacity of the blood. This, again, is in direct proportion to the relative number and quality of red corpuscles. It is plain, therefore, that the forced introduction of oxygen into the air passages does not necessarily produce an equivalent oxygenation of the blood. In order to arrive at distinctly physiological, *i. e.*, curative ef-

fects from this method, oxygen must be not only inhaled, but absorbed. The blood of a consumptive is wretchedly poor in oxygen, because the elements which carry it are poor in quality and reduced in number. Hence, it is clear that the benefits of oxygen inhalation are, to a large extent, illusory in character. Then again, there is present in the organism that indefinable element which demands bulk or mass of physiological fuel, rather than concentration or extraction. The experiments which have been made with concentrated food elements as a pure unmixed substitute for food in bulk or mass, apply analogously to the problem of oxygen feeding. The disappointments which have followed these experiments have demonstrated that the human body and the test-tube of the physiologist are alike only in a provisional sense. The lungs demand bulk, not an extracted element. They crave for air, not for oxygen. Yet oxygen inhalation is not altogether valueless. Aside from being a potent psychic factor, it gives the chest a gymnastic training, and helps the patient to breathe deeply.

What has been said concerning oxygen inhalation holds good in regard to ozone inhalation. Ozone is an irritating gas, and, for this reason, is not very well borne by the air passages of the average consumptive. The popularity of the static machine has brought ozone prominently before the professional mind. Every static machine has its ozone-generating attachment, and the enthusiastic owner of such a machine never wearies of extolling the virtues of ozone. That the enthusiasm of these men has given rise to many an extravagant claim in its behalf, it is quite natural to suppose. The odor of the gas, not unlike chlorine gas, is disagreeable to many persons. Unless the gas is largely diluted with air, it is very irritating, and can hardly be borne by the average consumptive. If it is administered in a badly-ventilated room, the procedure is of questionable value. Ozone is in no way superior to oxygen as an inhalant, and possesses many disagreeable features which oxygen does not. After all, it is the mechanical act of deep respiration wherein lies the good of any inhalation method. The mechanical act of deep breathing does the good. The substance inhaled (and there are thousands recommended) is the psychic and persuasive factor. A record of chest expansion should be kept.

Deep breathing must be enforced, cost what it may. Niemeyer had an ingenious system of making his consumptive patients breathe deeply. He divided them into two classes. Each class was compelled to go out into the open air and walk slowly until they were tired. Then the members of the class were given a chance to lie down in invalid chairs or hammocks and rest. One of the number had to read aloud until another one took his place. Occasionally the whole class had to read, sing, whistle or play on wind or brass instruments. In this way the lungs were constantly active. The children were allowed to romp over the grounds at pleasure. Those that were too weak were allowed to sit in the open air and make soap bubbles with straws. No patient's lungs were allowed to remain idle. It makes no difference how inhalation is effected. The principal thing is to enforce it. There is a sanitarium in the Black Forest, in Germany, which—with due apology to the author of the Divine comedy—has a sign over the entrance to the grounds which reads thus: "Walk slowly and breathe deeply whoever enters here!" Sudden changes in the temperature of the inhaled air should be avoided, especially if the bronchial symptoms are well marked.

On another occasion I hope to discuss the value of other physical therapeutic agents in the treatment of consumption.

628 Elm Street.

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Psychical Inhibition and Its Consequences.

BY R. W. SHUFELDT, M. D.,

Major, Medical Department United States Army (Retired); Member Medico-Legal Society, New York City, Etc., Etc.

New York City.

If we assume that psychical science is that science which has to do with all that pertains to mind and its attributes, both known and unknown, to life in its physiological sense, then all animal forms when

living offer the legitimate material for investigation of psychical phenomena on the part of the scientific psychist or psychologist. It would not only apply to man, but all the way down through the scale below him, to include the lowest types of animal forms endowed with life, and exhibiting mentality of any degree whatsoever. Many there are who include the study of the "human soul" in the domain of psychical research, but as there appears to be no evidence having any claim to reliability, up to the present time, of the existence of any such a thing as a "soul," human or otherwise, it must be understood that in discussing what is to be discussed here, only what is psychologically recognized as mind and life will be given consideration.

By life is meant simply corporeal existence in animals—vitality—and with the cessation of life the phenomena exhibited on the part of mind, in any individual instance, at once ceases with it. Mind involves volition, sensation, and the power of thought. It is the ego, and stands quite apart from any such a conception as an hypothetical soul, and much more distinctly from what some define as spirit. There are those who utterly confuse the matter of mind with what romancers define, since the dawn of history, as "soul" or "spirit." Some even conceive the soul of a person to be a substantial entity, retaining the body's general contour after death, and in that state has received all sorts of appellations by different peoples. It has further been contended that this soul, during life, possesses all the emotions, conditions, sensations and powers above attributed to mind, including the power of the will. In recent times it has been claimed that all animals below man, and even plants of all descriptions, possess a soul, which surely is absurd, though it can be easily demonstrated that all living organized beings possess mind and reason, and hence will power, in some degree or another. Further, it has been held, and is held by the legion of the superstitious to-day, that this so-called soul of animal, and even plant life, feels, thinks and wills after dissociation from the dead body—a state and a thing that, to the scientific mind, is quite inconceivable.

Will, in the living animal, means nothing more than the power of conscious, deliberate action, whether exerted in any way on the part of any portion of a healthy or an unhealthy body, under the direction of a sound or an unsound mind. When the action is involuntary, as when an animal flinches from any sudden danger, then such action becomes instinctive, and is not performed under the direction of what is here defined as will. Instinctive actions, however, may be simulated with greater or less fidelity, the same morphological portions of the body being brought into play to enact them. As an example, the difference may be seen in the case of a malingerer feigning an attack of epilepsy, as compared with the involuntary movements observed on the part of one undergoing the invasion of a genuine seizure of that disease. During life, in animals normally constituted, the will is under the control of the mind, and in all respects its servant where it is voluntarily exerted.

Now, in psychical or psychological operations, the mind may decree to perform a certain act or thing, and if the performance of such an act be perfectly possible, and the body of the animal, at the same time, be in all respects in a normal and healthy condition, then, if no hindrance of any kind whatever is interposed, through the exertion of the will, that particular act will be performed, and, in all probability, performed to the entire satisfaction of the animal willing it. There are all shades and degrees of such acts, and the nature of them is wellnigh infinite. Involuntary acts on the part of the body or any organ or portion of it, however, are in the matter of numerical comparison, almost immeasurably less in number or kind. Then there are the distinctly involuntary actions involved in the functions of many of the organs of the body, that are not under the control of the mind or the will, as, for example, the peristaltic action of the intestines and other organic structures. Others, to a greater or less degree, may be under the control of the will, psychologically directed, as, for example, the increase of the respiratory movements of the lungs; the deferment of the act of normal defecation or micturition, and similar func-

tional performances. These voluntary and involuntary acts shade into each other in all manner of ways, and in both healthy and unhealthy animals their study is of immense importance, while at the same time few subjects present a greater amount of interest in the matter of research and experimentation. In extremely rare instances we may even meet with subjects having an extraordinary control over the usual involuntary action of some of the organs or viscera of the body. Many years ago the writer had a woman under observation who possessed the power of exciting a diarrhea in herself by simply "giving her mind to it," and a male patient had the most remarkable mental control over the action of his heart, rendering, at will, its usual beatings almost inaudible to the ear of an expert examining it.

Now, it has long been known to physiologists that inhibition of reflex action pertains to certain organs of the body as a normal condition; as, for example, the inhibitory influence of the pneumogastric nerve over the heart's action. This restraining, or hindering, or repressing of the organ's usual action is effected in a reflex way from the higher nervous centers through the nerves of distribution to the organ thus inhibited. Inhibition of this nature may be designated as organic inhibition. As has just been pointed out, it may, in very rare cases, be induced or suspended through a mental operation by means of the will of the subject having such a power.

Psychical inhibition may be described as a checking or repressing of the operation of the mind or the will in any animal, and in some instances it may be associated, in a way, with organic inhibition. The checking or repressing of an involuntary yawn; as compared with the similar repression of one commenced through the voluntary effort of the mind, is an example of this.

Psychical inhibition may be exemplified in any representative of the animal kingdom, from the lowest to the highest forms. In all it may be exerted in an infinite number of ways, from the instant of birth until the death of the individual. Its primary effects and ultimate results or consequences vary in different species and races; in different temperaments, diseases and states of health; in the two sexes and at different ages, and at different times under different circumstances in different environments. Thus, it will be seen that the subject is a very large and far-reaching one.

A moment's reflection at the outstart is sufficient to convince one that psychical inhibition may operate in one of two ways. Let us take, as an example, an average boy of our own race, at the age of puberty. He is a child of intelligent parents, but, as in most families, sees in his antecedents, extending far back into the future, all manner of relatives, both male and female, who were represented by all kinds and classes of people. The natures and impulses of some of these may have been decidedly good, and they may have possessed minds and wills to live out those natures, both to their own credit and to the distinct advantage of every one with whom they were associated. On the other hand, some of this boy's ancestors may have been endowed with pronounced criminal instincts, and they, too, being of energetic casts of mind, lived lives that were a curse to themselves and disastrous to the community of which they were a part. Finally, others may have been mental weaklings of no use to themselves and simply a burden to all their friends and relatives of the times in which they lived.

Now, through inherited proclivities, this boy will, sooner or later, begin to develop what is in him, and, if he lives, evolve the kind of man he is to become, or may become—may become, for it will altogether depend upon what is brought to bear upon his mind and will as to whether his real nature asserts itself or not. If he possesses strong criminal instincts of any kind whatever, they may be so strong that no amount of influence brought to bear upon the natural bent of his mind and will can ever, at any time in his life, turn him into the narrow road of a virtuous and worthy life. Such influences may, and probably will, affect him in one way or another, but he remains a criminal nevertheless to the end of his existence.

Here is one kind of psychical inhibition wherein the deterrent effect of its force

fails. But there have been, and will be in the future, all grades of it, depending upon the nature of the individual and the character of the influence brought to bear upon him. In some instances the criminal instincts may be so weak in the boy, and the inhibitory influences brought to bear upon him so good and so long continued, that in time all that is bad in him is subordinated to such a degree that his life's career is rendered a thoroughly worthy one. Although extremely interesting in many cases, and perhaps important in others, we need not here consider the influence of psychical inhibition in the case of mental weaklings and sexual deviates. With respect to the former it were better had they never come into the world, and as to the latter the subject is too complicated an one to discuss in this place.

Our hypothetical boy, however, may possess a character just the reverse of the one depicted above, and instead of the criminal strain in his composition it may be one that will reach, in varying degrees, the most exalted standards for virtue, energy, talent and usefulness to his fellow men. Here, again, the restraining influences brought to bear upon his mental bent and will, may be, upon the whole, good or bad, weak or strong, of long or short duration, the results being just the opposite of these described in the case of the boy of depraved and criminal inclinations and character. Their full consideration would exemplify the second kind of psychical inhibition that may prevail with certain classes of individuals. In the matter of its operation psychical inhibition may be mutual, that is, be interoperative between any two persons; the sexes may be the same or they may not; the nature of the influence may be of a great many kinds and brought to bear upon the mind and will in an untold number of ways. It may be subtle, it may be brutal or gentle, insinuative or pronounced, weak or forceful, good, bad, or indifferent, and so on. Again, it may be brought to bear through the power of speech—the voice, or through the eyes and features, or through certain actions—behavior, or through all of these combined.

We may study this question of the restraining power of one mind and will upon another, and its consequences in all phases, grades, and classes in society, but perhaps nowhere to better advantage than we can among the married. When this is said, special reference is made to those of the Indo-European race who have entered upon the monogamic bond of wedlock, and who are living in close domestic relations with each other. Where such couples are mutually and harmoniously affined, no such thing as the ill-effects of psychical inhibition are to be observed, for the "incompatibility of temper," which is often another name for it, is not there to give rise to them. If each of such a pair are healthy in all respects, both mentally and physically, they simply grow as they should grow, their natures evolve as they should evolve, their home environment stands in evidence of all this, and the results of health, happiness, success and prosperity are almost invariably present in their domestic atmosphere.

It is only where the reverse of this is the case that the dire evils of psychical inhibition come in and become more and more evident as the life-spans of the pair are lived along, eventually terminating either in divorce, in insanity of one or the other, or both, wreckage of health and happiness, and a growth of surroundings which to call a home would be the very height of mockery. The aims, tastes and ambitions on both sides here may be of the best in the world, while they are not mutually compatible, and in their strife to adjust them, to subordinate or ignore them, consciously or unconsciously, the operations of the mind and the will, usually of both parties, is through an ever-present inhibition distorted in a thousand ways.

In the vast majority of instances the physician is called in sooner or later. If he chances to be of the right sort he will, in time, recognize the cause of the various physical troubles, the unhappy faces, and the atmosphere of restraint about the home. Should he not possess the necessary education, however, and other qualifications, he may treat the mental and physical troubles of this unhappy pair till the crack of doom and then effect no cures.

Through my own observation and in my own practice I have recognized no end of cases of this character, and the usual consequences consist in the development in the different types of individuals, of various manias, as dementia, or melancholia with suicidal intent; neuralgias, alcoholism, obscure maladies associated with the nerves and muscles, chronic gastritis of a low form, cardiac troubles, impotency (in the male), constipation, and sometimes a general warping of mental and physical development. I must believe that physicians will do well to bear all this in mind.

471 West One Hundred and Forty-Fifth Street.

[Written for the MEDICAL BRIEF.]

Methods of Ascertaining the Renal Function and Its Importance to Surgery.

BY L. W. BREMERMAN, A. M., M. D.,

Formerly Professor Genito-Urinary Surgery New York School Clinical Medicine; Visiting Surgeon Oak Park Hospital; Member American Urological Society; Member Chicago Medical Society.
Chicago, Ill.

Operative surgery upon the organs of the genito-urinary tract has advanced during the last half century so that operative procedure is carried out almost fearlessly, yet mortality sometimes occurs unexpectedly, due to failure of the renal function, causing a complete suppression of the urine. The subject of the renal function in its relation to surgery is of vast importance, and I will endeavor to portray the different methods of ascertaining the total functional activity of the kidneys, as well as the manner of estimating the function of one kidney.

When a nephrectomy is performed, the essential question is the efficiency of the other kidney, and if the operation is performed on any portion of the lower urinary tract, it is wise to ascertain, as far as possible, the renal activity. I will consider the methods of computing the adequacy of the other kidney in nephrectomy, for when one kidney is removed, the functional activity of the remaining organ should be known, for the disease may be of bilateral character, and the removal of one organ may bring such a strain upon the other kidney that it will cause a complete suppression of urine, with a fatal result.

The object of ascertaining the functional activity of the kidneys, is to learn whether or not the action of the kidneys is lowered to such an extent that an operation will almost invariably prove fatal. Ordinarily, the urine is examined chemically and microscopically in all surgical operations, but this does not always prove whether or not the renal activity is normal or is lowered.

Exploratory incision is not often done at present, due to the fact that the functional properties can not be reliably ascertained.

J. W. Thomson Walker, of London, has shown that exploratory operation of the kidney is inadequate for diagnosis even when the methylene blue test was used, for, on incising the kidney, although the blue color of the urine was strongly marked, he found that upon exposure to the air the blue color of the tissue could not be produced. He had hoped to be able to ascertain the extent of the fibrous changes in the renal substance by the variation of the stain, but as has already been said, no change of coloring was observed, nor did it occur when hydrogen peroxide was used. It is necessary, then, that other methods must be employed to enable the surgeon to know more or less definitely the functional activity of the kidneys.

We will first consider the subject of cryoscopy. The physiologist teaches that the kidneys separate from the blood, and excrete a fluid, the urine, differing in composition from the blood. It has been shown that the function of the kidney is osmotic, and that the osmotic pressure of the urine is greater than that of the blood, therefore the work of the kidney may be ascertained by measuring the osmotic pressure of these two fluids. By osmosis is understood the changing of relations between two chemical solutions of different concentrations, which have for their purpose the equalization of these differences of concentration.

It has been demonstrated that there is an increased concentration of the blood in diseases relative to the kidney, and that

with the increase of the osmotic concentration of the blood, there is a corresponding decrease of the osmotic pressure of the urine.

Kümell lays great stress upon cryoscopy. Prior to its systematic use in all cases, his mortality for nephrectomy was one in six cases, on account of the absence or insufficiency of the other kidney. Since its use he has not had a single mortality in one hundred and forty-eight cases where one kidney was removed.

Cryoscopy of the urine, I believe, to be entirely too uncertain in its results to be of much value, as there is a marked variation in the co-efficient or freezing point in samples of healthy urine; particularly is this so in urine drawn from the bladder.

Cryoscopical examination of the blood, where the freezing point is markedly constant around -0.56° C., that any marked deviation from this point will be indicative of renal inadequacy. Kümell claims that where the freezing point of the blood is lowered beyond -0.58° C., it shows bilateral kidney disease.

I am inclined rather to accept the views of others that when the freezing point varies between -0.60° C. and -0.65° C., that a diagnosis of the bilateral disease can be made. This procedure, combined with the cryoscopy of the urine drawn from the separate kidneys by means of the ureteral catheter, is of considerable value.

The determination of the freezing point of the fluid is usually made by the Beckmann apparatus, which consists of a thermometer marked off in one hundred divisions, each of which is sub-divided into one hundred parts. This thermometer is immersed into a glass cylinder in which the fluid to be examined must be stirred continually, with a rod of platinum. The glass cylinder with the thermometer and fluid is placed in a freezing mixture at a temperature of -4° C. The fluid is continually kept in motion by the platinum rod. There is an instant when the fluid congeals. As the liquid changes into solid state, heat is expelled, which causes the mercury to rise to a certain point, where it remains suspended for a short time. This is the freezing point of that fluid. The freezing point of distilled water must be ascertained by then subtracting the former from the latter; we attain a figure which shows how much lower a temperature the fluid freezes than distilled water.

In demonstrating the freezing point of blood, a sample of from twenty to fifty cubic centimeters of blood is taken with a hollow needle from the vein of the arm. This is collected in the glass cylinder, and is defibrinated by stirring with a platinum rod. The freezing point is then taken. The freezing point of distilled water should be taken at each examination, for the purpose of testing the thermometer. With a little experience this test may readily be made in thirty minutes.

Another important test is the phloridzin test, brought into prominence by Klemperer, who discovered that phloridzin glycosuria did not take place in cases of chronic nephritis, but to Mering we must give the credit of first discovering that injections of phloridzin causes a temporary glycosuria.

Archard and Delmere have demonstrated the fact that phloridzin glycosuria was dependent entirely upon the efficiency of the renal excretion, and that any deviation must be produced by an abnormal functional renal activity.

Kapsammer, after an experience covering two hundred cases, declares most positively that phloridzin glycosuria should make its appearance within from ten to fifteen minutes after the phloridzin has been injected into the tissues. A delay of thirty minutes speaks for the essential functional disturbance of both kidneys, and if delayed for forty-five minutes, a nephrectomy is contraindicated.

Kapsammer uses the following technique: He injects into the tissue .01 grm. of phloridzin, and five minutes after the injection he makes his first test of the urine for sugar. This is repeated every five minutes until the sugar makes its appearance, if at all Personally, I can not conceive how Kapsammer can make such a positive statement from the examination of urine taken from the bladder which has been excreted by both kidneys. I will demonstrate later how this test may be carried out to much better advantage by carefully testing the catheterized specimens from the separate kidneys.

The methylene blue test for determining the activity of the renal function depends for its value upon the following points:

The time of the beginning of the elimination.

The duration of the elimination.

The quantity of coloring matter eliminated.

The colorless derivity of methylene blue is chromogen, the test of which is to boil the urine with acetic acid, which changes the chromogen into methylene blue. Blue does not enter into the urine until about thirty minutes have transpired. In diseased kidneys the elimination does not begin sometimes until several hours after the injection, and in some cases it does not appear at all. The delay in appearance is entirely proportional to the extent of the pathological lesion occurring in the kidneys. There are many errors which may arise in this test, for disease of the lower part of the urinary tract may cause delay in the elimination. Obstruction in any part of the lower tract, such as stricture of the urethra, hypertrophy of the prostate, partial or complete ureteral obstruction, has a marked influence in delaying the elimination of the blue, hence errors may arise in diagnosticating the renal functions. In a healthy individual, the time for the total excretion of the blue is, as a rule, from about sixty to seventy-two hours. According to my own observations I have noticed blue in the urine for a week after it has been injected.

Beers, of New York, claims that the blue may be eliminated after many weeks or months in cases of pyelo-nephritis, in the shape of blue stained particles of pus. He further claims that this is absolutely diagnostic of pyelo-nephritis. The methylene blue is deposited in the parenchymatous abscesses, which rupture into the pelvis of the kidney, and thus the blue stained pus is eliminated.

Delay of the methylene blue is supposed to be diagnostic of kidney disease. To make this test more accurate, the quantitative estimation of the blue must be taken into consideration, for the total quantity of blue is decreased in elimination if the function of the kidneys is impaired.

The technique of the methylene blue test is as follows:

Fifteen minims of a five per cent solution of pure methylene blue is injected into the tissue. The injection is usually accompanied with considerable pain.

I might mention here Beer's method of diagnosticating partial or total ureteral obstruction by the indigo-carmin test, He injects, hypodermically, a sterile concentrated aqueous solution of indigo-carmin into the tissues, and by an examination with the cystoscope and urethral catheter, he is able to diagnosticate ureteral obstruction. I quote from Beer's article as follows:

"A diseased kidney may fail to excrete, or excrete very late, indigo-carmin, without the use of the ureteral catheter; one might be misled to diagnose complete ureteral obstruction in such case though the ureter be patent. Thus it is clear that one method does not exclude the other, and that both must be used together. The ureteral catheter will arouse our suspicion of obstruction, and the indigo-carmin will verify or dispel this."

I find that ureteral obstruction is comparatively a simple condition to diagnosticate by means of a ureteral catheter without the aid of the indigo-carmin test. This method might prove rather misleading, particularly if the kidney was pathologically affected.

The electric current has been used in this work to enable us to reach more definite conclusions as to the efficiency of the kidney function.

It is evident that aqueous solutions offer resistance to the passage of an electrical current, which varies according to their composition. An electrical current passing through the urine owes its conductivity to its mineral elements, and not to the organic constituents. So the conductivity is hindered or enhanced by an increase or diminution of the mineral contents. It has been claimed that very satisfactory results may be attained as to the renal function by this method. The same disadvantage may be recited as for some of the other methods, as so many extraneous conditions are liable to upset the general character of the urine.

In taking up the methods that are employed for ascertaining the function of

the second kidney where one is known to be diseased, depends entirely upon the knowledge of cystoscopic examination and technique, and the catheterizing cystoscope, for examination of the separate specimens of urine is essential for a diagnosis. A simple cystoscopic examination of the ureteral orifices may aid us materially in reaching a conclusion as to the function of the second kidney, and the extent of the pathological lesion in the diseased kidney.

Neuman has outlined the diagnostic value of the appearance of the ureteral orifices in a disease of the kidney in such a typical manner that I will give his classifications:

1. When one orifice is altered, and the other normal, the renal lesion is on the side of the abnormal ureter, and the character of the deformity of the orifice may indicate the nature of the renal lesion.

2. Active congestion and swelling of the mucous membrane in the neighborhood of the orifice, and along the line of the ureter, also swelling and pouting of the lips, denote acute irritation of the pelvis or parenchyma of the corresponding kidney.

3. A dilated orifice, the lips acutely congested, while the color of the bladder is little changed, denotes recent and acute inflammation or mechanical irritation in the corresponding pelvis.

4. A dilated orifice, the lips being thickened and only slightly rounded, the mucous membrane between the lips of a dark red color, while the mucous membrane of the bladder is deeply injected and pigmented, especially along the line of the ureter, denotes descending ureteritis with dilatation.

5. An elongated or dilated mouth with hyperemia of the lips indicates acute inflammation of the parenchyma or recent distention of the renal pelvis.

6. A punched-out orifice, marked by thickening of the lips, and induration and congestion of the surrounding mucous membrane, indicates a dilated ureter with ascending ureteritis, the infective process extending along the surface by continuity.

7. A pin-head opening on a well-defined ridge of deeply pigmented mucous membrane, indicates induration of the walls of the ureter from the ureteritis; the infective material being conveyed from the primary focus in the kidney or bladder, principally, through the lymphatic glands and channels.

8. Pin-head contraction of the mouth of the orifice, without other vesicle changes, denotes spasm induced by pressure of a rough calculus impacted in an irritated ureter.

9. Inflammation of the mouth, and thickening of the lips, with inflammatory changes limited to the mucous membrane immediately surrounding the ureteral orifice, denotes mechanical irritation of long standing.

10. Simple dilatation of the mouth, without much thickening of the lips, and with congestion limited to the orifice and neighboring parts, suggest mechanical irritation of recent origin.

To a certain extent, these rules as laid down by Neuman will give us certain facts regarding the condition of one or both kidneys, yet, they may be more or less erroneous in reaching a positive knowledge as to the functional activity of the organs. The statistics gathered from the literature regarding kidney lesion is of some value in ascertaining kidney disease, but, however, the statistics of different authorities vary to such a great extent that their value is exceedingly limited.

Morris has found that solitary kidney exists in about one in two thousand six hundred and fifty cases. Kelynack claims that malignant growths occur bilaterally, one in every ten cases.

Polycystic kidney occurs bilaterally, according to Israel, in four in four cases. Morris three in seven cases. Dickenson's collected cases, twenty-five in twenty-six. Calculus is bilateral in fifty per cent of cases collected by Legueu; 11.78 per cent of Küster's cases, and 25.3 per cent of Torré's cases. Pyelonephritis is bilateral in eighty-three per cent of cases, according to Weir, and tuberculous disease is bilateral in about fifty per cent of cases. The variation in the different statistics cause them to be of little value.

The indigo-carmin test suggested by Joseph is made by injecting four cc. of a four per cent solution of indigo-carmin into the tissues. Elimination begins after twenty minutes, reaching its height in

about thirty minutes, and is complete in about two hours. Examination of the ureteral orifices, and the characteristic appearance of the urine pouring forth, together with the depth of staining of the urine, will give some idea of the functional value of the two kidneys. Methylene blue may be used in place of indigocarmin with practically the same results.

Ureteral catheterization with a collection of the separate specimens of urine for the purpose of making the different tests already mentioned is, to my mind, more valuable than the examination of the urine drawn from the bladder. The quantity of urine passed by the catheter in a specified length of time can not be used as a standard owing to the fact that the excretion may be influenced by many conditions, such as diet, nervousness and climatic conditions.

The author has seen the excretion of the kidney stop entirely for many minutes while the other was excreting normally.

Albarran gives the following as a standard analysis of the urine collected from one kidney during an hour in a healthy individual: Quantity, fifty to sixty cubic centimeters freezing point -1.20° to -1.50° C. Urea twelve to seventeen grms. per liter. Sodium chloride, ten to twelve grms. per liter.

If two separate specimens of urine have been collected into sterilized test tubes, cryoscopic examination of these specimens will give considerable information regarding the difference of function between the two kidneys. The sympathetic connection between the two kidneys is particularly marked, and it must not be forgotten that the function of a healthy kidney may be more or less influenced by the diseased condition of the other kidney. The functional activity of the known kidney which is healthy, or nearly so, will be decided upon if the volume of the urine from this kidney is greater, and the freezing point shows a greater molecular content than the urine which is collected from the diseased kidney.

The methylene blue test may be performed in the same manner as given above, with the exception that after the injection of the methylene blue the ureters are catheterized, and the separate specimens of urine collected from each kidney. These are watched carefully from time to time as they drain, to show the presence of chromogen or blue. The chromogen should appear in the urine after about fifteen minutes, if the kidney is functionating normally, and the blue color should commence in about thirty minutes under the same conditions. If the elimination of the chromogen or blue is delayed, the loss of function of the kidney is proportionate directly to the time of the appearance. Examination of these separate specimens not only are of value in determining the function of the second kidney, if one is known to be diseased, but will give us an insight into the pathological condition of the diseased organ.

The phloridzin test may be carried out along the same lines, and the separate specimens examined every five minutes for the appearance of sugar. In a healthy kidney, the elimination should begin in about fifteen minutes, and if it is delayed for thirty minutes, there is a marked functional disturbance going on in the kidney, and if delayed for forty-five minutes, removal of the diseased kidney is contraindicated.

The catheterized specimen of urine from each kidney is important from a diagnostic standpoint, for by a careful microscopical examination of these specimens, the pathological lesion in one or both kidneys may be accurately diagnosticated, for Heitzmann has proven without a doubt that it is possible to differentiate the epithelial cells that come from the different portions of the genito-urinary tract. He is able to distinguish between pelvic epithelium and epithelium from convoluted or straight tubules. He also states that if there is pus in the urine, together with desquamated epithelial cells, the pus is coming from that portion of the tract that is desquamating the epithelium, so from a comparative microscopical examination between the diseased kidney and the other one will give us striking evidence as to whether or not that kidney is free from pathological lesion. If there are present pus and epithelial cells, the comparative relation between those found in the diseased side, and those found in the other will give us

a sure method of ascertaining the condition of both kidneys.

I believe if the microscope shows considerable number of pus cells and desquamated epithelial cells from the tubules of the supposed healthy kidney, that a nephrectomy is contraindicated, as the strain thrown upon the remaining kidney is liable to increase the inflammatory process, or to cause complete suppression of the urine, and death, due to uremia.

I have endeavored, as far as possible, to dwell briefly upon the different methods of ascertaining the functional activity of one or both kidneys, but I am of the opinion that no one method will give us sufficient information.

I think that all the methods should be carried out, particularly, upon the catheterized specimens from the separate kidney, and by comparing the different data developed from this examination, we can come to a positive diagnosis as to the relative function of the kidneys. For a quick examination, I believe that the phloridzin test of the catheterized specimens, together with a careful microscopical examination, with a study of the characteristic epithelial cells in each, will give sufficient evidence to base our opinion of the functional activity of the kidneys. If there is a marked deviation from the normal, the kidneys are functionally inactive, and if this should occur in a supposed healthy kidney, a nephrectomy of the diseased organ is contraindicated:

The determination of renal function is exceedingly important from the standpoint of surgery, not only on the genito-urinary tract, but to general surgery as well, for hardly a day goes by, that I do not hear of a death that occurs after a major surgical procedure due to the insufficiency of the kidneys.

I believe that if a more careful study of our cases in relation to the function of the kidneys were made, that mortality would be decreased, due to the fact that a surgical procedure would be contraindicated when the kidneys were proven to be functionally inadequate.

908 Chicago Savings Bank Building.

CRABBE says: "Books can not always please; however, good minds are not ever craving for their food."

[Written for the MEDICAL BRIEF.]

Hebotomy.

BY F. T. FORT, M. D.,

Professor of Practical Anatomy, Operative Surgery and Surgical Dressings; Surgeon to the Illinois Central Railroad.
Louisville, Ky.

This operation I saw for the first time in Berlin, and, so far as I know, it has not yet been introduced here. Hebotomy has been performed successfully by some of the most eminent surgeons in Berlin, who speak very highly of it. I had the pleasure of witnessing one operation, and heard a very interesting paper read upon the subject before the Anglo-American Medical Society, in which the author described six cases, all of which were successfully operated by this method.

Symphysiotomy is an operation consisting in the cutting through of the pubic symphysis, and allowing the bones to separate, thus increasing all the pelvic diameters.

Hebotomy is an operation for a like purpose, viz., increase of the pelvic diameters, but different from symphysiotomy, in that the bone is sawed or cut through, while in the older method the bones are separated by cutting through the cartilage.

There are several advantages claimed for hebotomy; first, perhaps, of these is the fact that there is less motility at the place of separation.

Second, a better union is obtained where the bone surfaces come into contact, and the reparative process is more active than where the cartilage alone is cut through.

Third, there is less likelihood of producing laceration of the bladder, urethra and soft parts, as the separation of the bone is slightly lateral to the median line.

The operation of hebotomy is performed by cutting down to the right or left, preferably the right, side of the symphysis. A full curved needle is introduced, threaded to carry a chain saw, encircling the pubic bone, and sawing from within outwards.

After the operation has been completed and the child delivered, the after-treat-

ment is very similar to that of symphysiotomy; that is, in the use of adhesive strips around the pelvis, and the closure of the small opening made for the introduction of the needle. The patient is kept in bed from three to four weeks.

In symphysiotomy, the general mortality is from eight to twelve per cent. The success attending the limited numbers of cases of hebotomy leads me to believe that its introduction will cause a further lessening of this mortality.

406 Chestnut Street.

[Written for the MEDICAL BRIEF.]

Septicemia.

BY R. J. BOYNTON, M. D.,

Instructor of Materia Medica, College of Physicians and Surgeons, Boston, Mass.
South Framingham, Mass.

In view of the gravity of the above condition and its frequent occurrence I believe many physicians will concur with me in the opinion that few pathological conditions offer greater opportunities for energetic treatment and brilliant results. So frequently the result of procrastination, on the part of the patient, in the care of a trivial wound, or of inexcusable omission of prophylaxis on the part of the medical attendant, that I feel we should put forth extra effort to correct this foreign element, which we may have inadvertently permitted to inflict our patient. The following are citations of two recent cases, typical of the results I obtain.

Case of Mrs. S., age thirty-eight; in good health, except for slight cystitis. Youngest child aged twelve. Family history good. Was called early June 7. Found patient delirious at times, severe headache; pulse, one hundred and twenty and weak; temperature, 104.6° F. Had several chills and stated she had been in this condition about twelve hours. Obtaining a negative history, I gave an antipyretic in five-grain doses, for headache, ordered cold sponge bathing of face and hands every hour, and left.

Was called back in the afternoon, and found patient as I had left her in the morning. This time I obtained the interesting admission that she had inserted a hard-rubber catheter into the uterus, and a little blood came. The only change I made was to give one-sixtieth of a grain of strychnine and fifteen-drop doses of fluid extract echinacea every three hours.

On the 8th I found temperature 100° F., pulse one hundred and eight, and patient begging to be relieved of liquid diet, and wanting to get up. On the 9th I found patient normal, but weak, and left her to care for herself, ordering medication continued for a few days.

Case of Mr. H., aged sixty; good health; previous history good. Had slight chronic eczema of the lower third of right leg, which he had scratched a great deal, but had not suffered from it other than the itching.

On July 10 I found the patient suffering from chill, muscular pains and headache. Temperature 104° F., plus one hundred and eight and weak. Found abrasion over the tibia, surrounded by inflamed zone, and whole lower leg swollen and red. Two red bands, an inch in width, reached from knee to hip, and the glands of the groin were swollen and painful. I first opened up the point of infection, which had become encrusted, and cleaned it thoroughly with phenol solution, then I applied ammonium sulphoichthyolate to the entire inflamed area.

Cold sponge bathing of face and hands until temperature reached 100° F.; strychnine, one-sixtieth grain, and fluid extract of echinacea in fifteen-drop doses every three hours, constituted the only internal medication. Ammonium sulpho-ichthyolate was applied twice daily. This case made a rapid recovery, going out doors on the 13th, but had a slight relapse as a result. The knee becoming swollen and painful, I ordered him to keep off his feet and continue treatment, which was completely successful by the 18th.

While the above citations made good recoveries, they are not selected cases. In all septic cases I have found echinacea of great value, and I believe that when elimination of school prejudice permits its general use it will be found one of the most valuable additions to our *materia medica*.

[Written for the MEDICAL BRIEF.]

Some Remarks on the Pathology of Epilepsy.

BY MARC RAY HUGHES, M. D.,

Professor of Mental and Nervous Diseases Barnes University (Medical Department); Professor of Criminal Anthropology and Forensic Medicine, Benton College of Law; Associate Editor "Alienist and Neurologist."
St. Louis, Mo.

Up to the present time the pathology of epilepsy has not been definitely determined. Theories and hypotheses have been advanced, and have come to us from various sources, and from the pens of different writers, but in summing up their observations we can derive but the partial conception of the pathological condition of the arterioles of the cerebral cortex, and a few other structural changes.

The fact that contraction of the cerebral arteriole takes place during seizures does not fathom in any sense of the word the entire pathology. Each successive stage has a separate and distinct one. Heretofore, no one has ever taken the trouble to scientifically work out, through observations of the different stages of epilepsy, the exact mental phenomena.

Among animals the most common type to suffer from epileptic conditions are cats, and they furnish us the best subjects upon which to base our conclusions. They exhibit all the symptoms in successive stages that a human under the same circumstances would. Of course, cats, or any other animals of that class, as a rule, take the ambulatory form, but not always, unless artificially produced. However, the initial pathological condition is the same in any form, namely, arteriole contraction, though to a greater or less degree, depending upon the severity and amount of area involvement.

To get at the foundation and fundamental principles of this obscure pathology, we must necessarily secure the brains of animals during a seizure, which is easily done, although a different brain is quite necessary for each successive step, to show separately and distinctly the different pathological changes that are brought about during this mental phenomenon throughout all stages of the disease, and the separate classifications of the same. For instance, in grand mal there is a great amount of fluid in the ventricles, and naturally more pressure and vaso-motor disturbance, hence a more severe seizure than in petit mal.

The essential feature *sui generis*, in the pathology of epilepsy, all other features being subsidiary or organically causal, is in the alternating state, irritation and paralysis of the vaso-motor mechanism of the brain and allied nervous system, but chiefly the brain, especially at the beginning of the attack.

Epilepsy itself is a functional vaso-motor disease, an alternating vaso-motor condition of transitory paresis or paralysis and irritation, the irritation causing contraction of the arteriole supply of the convulsive area involved, and the extreme ventricular dilations, caused by excess of cerebro-spinal fluid in them, producing the coma and comatose symptoms.

A trauma or a blood toxine (auto-toxine or chemical-like alcohol, camphor, absinthe, amon. carb., intra-venous injections, etc.), or a peripheral irritation, faradism and galvanism, intra or extra intestinal, tapeworm, lumbricoid fistula in ano, etc., causes first a paralyzing impression on the vaso-motor mechanism of the brain blood supply or on the heart (cardiac epilepsy), causing the excessive pouring out of the cerebro-spinal fluid into the peri-vascular spaces and ventricles of the brain.

The distended ventricles or perivascular spaces by pressure give rise to the precursory aura, visual, auditory, gustatory, and other sensory forms, according to the part first feeling the pressure before coma comes on from excessive pressure.

The excessive pressure with the coma or comatose states irritates the vaso-motor centers of the brain, causing arteriole contraction and spasm of psycho-motor centers, and of parapsychic centers of the gray cortex, causing psychical epileptic automatism (vertiginous epilepsy).

This arteriole contraction, the result of primary distention, and the excess of cerebro-spinal fluid in the ventricles, cause the shutting off of the excessive cerebro-spinal secretion, and the return of the brain to its normal state after a

period of more or less prolonged sleep, according to the degree of vaso-motor anemia induced, the absorption and redistribution of the excessive fluid of the ventricles beginning again with the arteriole contraction, which, after the ventricular distention, and in consequence of it, first took place.

The cause of the spasmodic paroxysm is also the cause of the removal of the first cause of the epileptic condition, viz., the vaso-motor paresis and consequent pouring out in excess of the interventricular and perivascular space fluid into their natural receptacles in the brain. Whatever condition of the organism may cause first a paresis or paralysis of the vaso-motor mechanism so as to permit excessive filling of the ventricles to the point of such degree of distention as will bring vaso-motor irritation of the cerebral arterioles, will develop an epileptic or other convulsion.

A trauma, a toxicity of the blood, a peripheral irritation apparently transmitted from the surface or from an internal organ will do the same (gastric, uterine, rectal, etc.). The recurrency which characterizes epilepsy is due to a peculiar morbid vaso-motor impressibility acquired by frequent repetitions of the cause, and by hereditary impressibility.

All the facts in pathology sustain this view, and need not be detailed. So far as my knowledge of the subject goes, no epileptic brain where death came in the status has ever been found with undistended ventricles, and all known causes of epilepsy have produced this state of brain. Inebriety, general paralysis, cephalic traumatism, toxic influence organically generated or taken from the animal, vegetable or mineral kingdom, and psychic influences have produced this state and phenomena of alternating conditions of the vaso-motor nervous system when even epilepsy or epeleptoid symptoms have resulted.

Petit mal is a lesser vaso-motor paresis, and lesser arteriole contraction involving the area of consciousness.

Jacksonian epilepsy is the same, involving one or a limited number of psycho-motor centers. In petit mal, the attack stops short of the psycho-motor region and profound unconsciousness.

The inherent or predisposing tendency of arteriole contraction found in grand mal is greatly lessened in petit mal, for the seizure falls short of the psycho-motor area, the inhibitory centers lose their identity, and partial or complete paresis ensues inversely as the profoundness of the seizure and vaso-motor constriction which inhibits the arteriole blood supply to the brain, thus ushering in the paroxysm, and the succeeding vaso-motor relaxation which finally suffuses the brain. The symptoms vary according to the difference in successive involvement of area. For instance, the difference in the aurae as the different centers are touched by the malady in the beginning of the attack, and so also do the symptoms of Jacksonian epilepsy appear differently, as the different centers are attacked by vaso-motor constriction.

Jacksonian epilepsy is a limited psycho-motor epilepsy without involvement of other psychic areas of the brain, so in order to show the pathological changes in tissue of the vaso-motor nerve centers, it has been necessary to select specimens that show the condition of each tissue change during a seizure throughout the whole category of epilepsy.

The coarse or gross pathological anatomy, as I have mentioned before, may be any lesion that would alter the vaso-motor movements, aneurismal, embolic, thromboid, or traumatic pressure.

In presenting this paper it has been my purpose to show that each epileptic stage has a distinct pathology, and the entire category or classification of epilepsy, including the psychical varieties, has one common pathology, or gross structural change, and that this structural change, whether idiopathic or organic, has to do largely with the movements of the centrifugal and centripetal mental forces as we find them in the psychical equivalence of epilepsy, dual consciousness, obliviousness, and allied states of mental eclampsia.

3872 Washington Avenue.

Correction.

In Dr. C. R. King's article on Pneumonia, page 722 of the September BRIEF, the last ingredient in the second prescription should read Simp. Syrup q. s. 1 *drachm* instead of 1 ounce.

[Written for the MEDICAL BRIEF.]

Our Leprological Science is not Always Exact.*

BY ALBERT S. ASHMEAD, M. D.,
New York City.

From time to time we read in the newspapers that leprosy is hereditary and not "catching." But the illustrative cases, in every instance so related, are found to be just the opposite—contagious, and not hereditary. What was thought to have been heredity was merely contagion occurring in the family.

There never was a child born with stigmata of leprosy. The youngest leper, to my knowledge, was two and one-half years old. It was infected ("contagioned") with leper germs, as it showed bacteriologically leprous contamination.

Zambaco Pacha, of Constantinople, a very eminent leprologist, but not on all occasions without error, has claimed to have seen several very young children "born leprous." The stigmata which he believed leprous were not, however, real leprous lesions; they were "dark-colored skin," and mere "general weakness." There was no evidence here of the presence of leprous germs. A child born of parents, both of whom were in the late stage of leprosy, is almost sure to be weakly and degenerate. In those cases of Zambaco Pacha's, the diagnosis of leprosy was thought by many leprologists to have been erroneous. These critics were all men of immense leprological learning, who had seen hundreds of children born to lepers. No one in Japan, where there are one hundred thousand lepers, ever saw a new-born babe a leper.

Most of the oddities of leprological science of which we read in the daily press, are created in the reportorial rooms, and relate to the etiology, easy curability, etc., of leprosy. Some of these may be inspired by other persons for sensational purposes. They are enough, at times, to throw real science into spasms.

For example, I may quote here what was printed not long ago by a prominent New York newspaper, a special dispatch from its correspondent in New Orleans. This enterprising journalist informed a too credulous world of a great change in public opinion in Louisiana, "since the careful study for a dozen years" in that State had resulted in a cure being found for leprosy. "Soon," says this worthy scientist, "there will be no lepers in Louisiana, when the last one of those now in the leper home shall have been discharged cured or has died."

But, pray, how many of Louisiana's lepers have been segregated? How many are scattered over the south and southwest parishes?

Exactly one hundred and one lepers were put in the asylum, while the balance of four hundred were known to be remaining in the whole State. Yet the Berlin Leper Conference has declared that isolation was necessary to eradicate the disease, "Every leper," said the Board of Secretaries of the Berlin Leper Conference, "is especially dangerous to his family and fellow-workers." "Cases of leprosy frequently appear in the higher social circles." "Leprosy is now acknowledged to be a contagious disease." "Every leper is a danger to his surroundings, the danger varying with the nature and extent of his relations therewith, and also with the sanitary conditions under which he lives."

"The treatment of leprosy has only had palliative results up to the present time.

* * *

"In view of the virtual incurability of leprosy, and considering the good results which have followed the adoption of legal measures of isolation in Norway, the Leprosy Conference, as a logical issue of the theory that the disease is contagious, has adopted the resolutions offered by Dr. Hansen and Dr. Besnier, of Norway and France."

Here follow the three well-known laws, recommending "obligatory notification, of observation and isolation, leaving it to the legal authorities, after consultation with the medical authorities, to take such

* I send you three photographs of two Japanese lepers, the one front and side views, although he looks to be quite old, is a mere boy, aged fourteen years. The other is a girl of eighteen years old. These are typical cases of Japan's leprosy, and no one could mistake them for any other disease. Whoever sees a face like one of these may be sure he is looking at a leper. As educators then, of the general practitioners, to whom THE MEDICAL BRIEF goes regularly, these pictures of genuine lepers may do duty to our American race if you will print them along with my article. The great trouble in this country is that many physicians do not know a leper when they see one, and some cure other diseases and really think they have cured leprosy.

measures as are applicable to the special social conditions of the districts."

Even if the "cure" referred to by the New Orleans correspondent of the New York paper should result in the closing of

the single asylum in Louisiana there would be many other foci of the germ still left uneradicated. Moreover, that very ordinary treatment of leprosy that has been so strangely glorified in the public press, on occcasion after occasion, and so boastingly called a cure for leprosy, is by no means at all times a cure. Those three lepers, who were discharged as cured, could by no means be so soon so surely known to be cured. For enough time has not even yet elapsed since their symptoms abated to positively determine this question. Tortoules Bey, of Cairo, Egypt, has waited six and seven years, and even then "hesitated" to shout "cured." For he knew that as soon as the same remedy is discontinued for a length of time, the disease returns.

Of course, spontaneous cure may result in some of strong vitality or endurance, as Hansen claims for so many Norwegian lepers, some of whom have come to the United States. And it is especially noted in every leper country that some rich families are apt to have a "recovered" leper living at home. But spontaneous cures of leprosy would not be enough to clean up a whole leper asylum, so that its doors might be forever shut.

Some cases might even be claimed to be cured and discharged as *cured*, which are not unquestioned lepers. It is very easy to make the mistake in diagnosing the disease. Only bacteriological examination of many secretions or tissues may determine the point. And the positive or negative analysis should be published before "cure of a leper" is shouted abroad. Those authorities in Louisiana seem to be too anxious to claim curability by the identical medicines commonly used in every asylum in epidemic leper countries. There is nothing in Louisiana's climate to warrant a belief that these well-known leprosy remedies could act any better there than in any place else on earth. And even if we should be able to obtain there the same or greater measure of palliation, or "cure," as has been claimed in

every country, from time to time, by those same drugs, being continuously used, would that alter things? Even Besnier and Tortoulis Bey, or Hansen, would never authorize their own legal authori-

ties to rely on them alone to eradicate from a whole people the scourge of leprosy.

A long period of discontinuance of the remedies alone will definitely test the claimed cure of leprosy. Four years must pass by without return of tuberculous symptoms after apparent cure of consumption, according to the schemata of the National Association for the Study and Prevention of Tuberculosis, before we can call it a case of cure. When two years only have elapsed, without recurrence of cough, we say it is "apparently cured." It is the same with leprosy. No

one can say the disease is cured even if four years have passed.

Leprosy in Louisiana will not "pass away," even if all the lepers in the leper home at White Castle are discharged cured by chaulmoogra oil, arsenic, strychnin and good nutrition.

The *Voice of Job*, a newspaper published by the thousands of lepers of Colombia, says that these same measures are not curative, only alleviative.

Even Besnier's case, presented to the International Dermatological Association at Paris, which was claimed to represent a cure after five years' administration of two hundred drops of chaulmoogra daily, was questioned as to its reliability by the eminent man who had examined it.

In Louisiana the cures have resulted where only a maximum dosage of fifty to one hundred drops daily were administered.

The Egyptian specialists gave as high as five hundred drops a day, and then hesitated to claim ability to cure leprosy. Yet in Louisiana they dismiss lepers as cured one year and seven months after being put on very modest dosage, and even five months after a last attack of leprotic fever, and while the "patches of pigmentation" of leprosy (the macules) are "still visible as level with the surrounding skin," and while the "wrinkling of the lepromas are not yet perfectly smoothed."

How dare physicians call this a cure? Moreover, a case of cure in one of "high social standing" needs especial caution in determining the question, to avoid criticism afterward.

In persons of "high social standing," in every country, leprosy is frequently given another name. Thus social ostracism is avoided.

Even if the other eight lepers in the Louisiana Lepers' Home, who, it is said, are "well on their way to recovery, as all active lesions of the disease have been arrested," and even if in these cases, as the report says, the only symptoms remaining are "the ghastly pigmentation, the white or bronze color of lepers, which will take some time to wear off," even if these eight should recover to the same degree as the three discharged ones, and are discharged also, will this help out the eradication of leprosy in Louisiana? Will it not rather increase leprosy by scattering the foci to other human groups? In heaven's name, are not all those symptoms stigmata of leprosy? *Quand l'ouveut se debarrasser, d'un cheval morveux en le trouve sain.*

Epidemic and endemic leprosy in Louisiana is a distinct menace, as administered by present methods, to the welfare of nine millions of negroes in our Southern States, a race peculiarly susceptible of leprous infection.

Our benevolent care of lepers also is sadly out of joint.

"When I visited the lepers in Louisiana," writes Father Conrardy, "I did not inquire much about the treatment followed by the lepers. It was my intention to go back and then attend to that.

"It seems they are divided into three categories, those who are expected to be cured, the doubtful cases, and those for whom there is no hope. If the chaulmoogra oil makes them sick, codliver oil is substituted. I don't think the patients take the medicine very regularly after each meal; the most of them take the medicines. However, I can not say much about that, as I visited the lepers but two days.

"I thought to have them showed to me —the three classes—and to be enabled to see them take the remedies, but, owing to circumstances, I did not see them a second time.

"The reason there are only fifty-two, instead of two hundred or more, in the asylum, is because the lepers are not looked after by the Board of Health—things in New Orleans do not run smoothly. Lepers are known to be at large there. No law obliges them to go to the leper homes. Many believe leprosy to be very contagious, but, practically, the public looks upon it as not contagious. For my part I believe it contagious, but not to a very great extent, rather the opposite.

"How are we to explain the fact that quite a number of men and women lived on Molokai, during my long and intimate service there, with the conjoint lepers, and have not contracted the disease? Those same persons, men and women, had the best chance of becoming lepers, to contract the disease, living together as husband and wife, and, to my knowledge, did not contract the disease.

"Now that Dr. Dyer gets or has an extensive practice as specialist for skin diseases it is readily understood, for three lepers got discharged as cured. I have not seen them.

"Dr. Goto claimed, when in Molokai for the Hawaiian Government, to have cured several lepers, but these, as far as I know, were never discharged. He also has a hospital in the city of Tokio itself for the lepers, where he had, when I visited Japan, in 1896, some thirty lepers. I do not know how many this gentleman claimed he had cured. His hospital in Japan was by far not as clean as the leper home in Louisiana.

"The lepers in San Francisco would be glad, I am sure, if they were given in charge of these eminent gentlemen. It would also cost much less, and the lepers would be better taken care of. In Louisiana the leper administration gives the sisters (nurses) board and only one hundred dollars per year each for clothes. In San Francisco the employes are paid from $60 to $100 per month, besides their board.

"It seems to me, then, that for both the lepers and the administration, Sisters of Mercy are the best nurses to be found. No other persons in the world will do so well for so little money, because they are animated by higher motives than mere pelf—devotion to humanity being their passion, their greatest ambition.

"We know the Government at Washington has appropriated $100,000 or $150,000 to build a hospital, and to run it—I guess —on Molokai, but I have not heard that they have started it yet.

"In the meantime a Massachusetts physician, who is there, is getting a good salary, but so far, we have heard nothing about his work. I expect to go to China in September, and may stop off at the island to see how much the leper settlement has improved since I was there. I may still pay another visit to the lepers in Louisiana, but this last is doubtful.

"The treatment in Louisiana requires good food to back up the medicines. This will be impossible for me to provide to the Chinese lepers of Canton. For this reason I did not show as much interest in the matter as it seems I ought to have done when in Louisiana.

"With me it is not so much a question of *quality*, concerning the Chinese lepers, as of *quantity*. Instead of receiving only *one hundred and fifty* lepers in my care, for each of whom I will have only three cents a day appropriation, I might receive *fifteen hundred*, or many more, if I could spend for each the three cents a day.

"But, in time, I hope to induce the Chinese Government to care for its lepers. Next year 'a good physician,' now in England, will join me in the work; and

still another, from Belgium, thinks seriously of going to China to help us care for the lepers. When able to keep four Sisters of Mercy, furnishing them with board and clothes, without salary, then we will be pretty well fixed to care for the poor Chinese lepers.

"If those two physicians, without salary but merely on God's mission bent, join me, I will establish a kind of medical school for young men and young women, to train them as nurses, not so much for the lepers as for the people outside. Then leprosy could be more often recognized." Here endeth the lesson of this holy man.

Let me add that, in my opinion, if some wealthy, charitably-inclined person would only direct his or her attention to this work, so immensely humanitarian and Christian, among the Chinese, Hindoos, Japanese, or other lepers of the whole world, much good might be done for the poor unfortunates, so many of whom today are the prey of man's lowest motives, or have no one to care for them. Such a person would be praised by all the earth, and in heaven.

A lot of money is spent for things which concern not the human race, which do not ameliorate it, nor elevate it. When there is still, and always will be, so much suffering and misery in the world, it seems to me and others, wholly disinterested in the matter, other than philanthropically, that not so much money should be spent for dead things, inanimate statues, paintings, and the like, or for self-glorification.

We have museums for so-called objects of art, dead things, while the objects of art, human beings, boys and girls, men and women, the masterpieces of God, are not looked after. For my part, a poor, tiny babe is worth all and more than all the old statues of the past and of the present, and I may add, of the future.

Our civilization, so-called, perverts the natural taste in human inclinations. Some deluded persons will pet a dog, but will care nothing for a wretched human being who, no matter who this may be, even if a poor neglected leper, is worth infinitely more than the animals, and all the valued pieces in all our museums. That wealthy people prize more highly, those inanimate things, than human beings, ought not to be true. Education should refine and develop sympathy and love for the wretched people of every race, not only white, but black and yellow.

50 Cathedral Parkway.

[Written for the MEDICAL BRIEF.]

Treatment of Typhoid Fever.

BY SAMUEL METHENY, M. D.,
Professor of Theory and Practice of Medicine in Lincoln Medical College.
Lincoln, Neb.

In a large hospital experience I have treated many cases of typhoid fever with invariable success. This has been accomplished by simple and direct medication, with careful attention to diet, sponging and proper antiseptics. Two popular remedies frequently employed in the management of typhoid fever—calomel and quinine—I do not use, believing that they are invariably contraindicated.

When we consider the condition of the intestinal tract, it follows that the eliminative treatment is the rational one. If there is septic material in the intestinal tract it must be cleared away. This can be done by means of the salines and by enemas. Rochelle and epsom salts are non-irritating, and if given in small doses clear the bowels without producing violent catharsis.

When the bowels have been cleansed they should not be filled up with foods, as sometimes happens. Some patients tolerate milk, and this, with beef broth, or similar liquid food, should constitute the entire dietary. If I were limited to one food for typhoid patients I would unhesitatingly recommend beef broth. This is best prepared by trimming the shreds of fat from good fresh beef, then cutting the lean beef into little cubes and placing same in a jar of hot water and allowing it to simmer. The juice is squeezed out, seasoned with salt and given to the patient every three hours.

Medical treatment will depend upon the condition of the patient. Antiseptics are governed by the conditions present. While I do not care much for febrifuges, if there is much cerebral hyperemia and high tension of the nervous system, gelsemium is indicated. If delirium is wild

and muttering, hyoscyamus. If there is extreme tympanitic condition, turpentine stupes should be employed.

The temperature of the patient can be kept under control by frequent sponging. Enemas, also, relieve the feverish condition and should be given daily in the evening when the temperature is going up. If necessary an enema can be given both morning and evening.

My typhoid patients are permitted all the cold water they care to drink, not ice water, but pure cold water.

If the patient is in an extremely septic condition, the carbolates are indicated. If the tongue is brown and teeth covered with sordes, echinacea would be the chief remedy. If the membranes of the throat are dark colored and there is discoloration of the fauces, I prescribe baptisia.

By keeping up this line of treatment, eliminative, cleansing the bowels with salines, giving an enema once or twice daily, and sponging freely while the temperature is high, giving the patient all the cold water he cares to drink, limiting diet to beef broth, using antiseptics when they are indicated, my patients recover early and delirium is an unusual symptom.

315 North Fourteenth Street.

[Written for the MEDICAL BRIEF.]

The Correction of Errors of Refraction as a Therapeutic Agent in the Treatment of Various Disorders of Childhood During School Life.

BY AARON BRAV, M. D.,

Ophthalmologist to the Southern Eye Clinic; Assistant to the Wills' Eye Hospital. Philadelphia, Pa.

The school system of our large cities, while not in a state of perfection, is as good as we possibly can expect it to be, considering the condition and circumstances with which the controlling force of our board of education is surrounded. The pedagogues, learned and well-meaning men and women, who give their time and attention to the various school problems in the interest of our children, are often hampered in their work by politicians who understand the nature of the child very little, and by councilmen who will much easier vote appropriations for the construction of boulevards or for the granting of franchises than for the increase of school facilities that will place the children in properly-ventilated, well-lighted and fire-proof buildings, in which they have to spend six hours daily of their young and unstable years, during which time their mental and physical substance are in a continuous active process of development. The solons of our cities, composed of laymen not well versed in the physiologic phenomenon of childhood that characterizes the vital process of repair and growth, are—from the point of view of medical science and its most important branch, hygiene, that deals with the prevention of various bodily and mental defects, through its system of sanitation—unable to thoroughly appreciate the needs of our children of to-day. They measure by the standard of their own childhood, and fail to, or can not, differentiate between the condition that existed fifty years ago and the one that surrounds us to-day.

The rapid progress made in the affairs of the world within the last half century has left its impress upon the rising generation that requires constant study, investigation, and a careful adjustment of the sphere in which our future citizens are raised, is not only desirable, but eminently essential. Unless we revert to the days of darkness, unless we are indifferent to the physical and mental well-being of our children, we can not do better than invest our time and energy in developing our school system on a purely scientific basis that will prove a haven of knowledge, with the least expense of physical energy. After all, the physical aspect in our education must not be neglected. A sound mind requires a healthy body. If we compare the school system of half a century ago, with its simple and few studies, with the complexed system and numerous branches of to-day, superficially, we shall arrive at erroneous conclusions, and claim that our children are overtaxed far beyond their power of understanding, and we may then, perhaps, agree with Dr. Hollopeter when he says that "our school system produces hardened men and women, many of whom sink to criminal-

ity." But a deeper study of the mental power of the children of the present day will reveal the fact that they keep pace with the world's progress, and they are more receptive to intellectual impressions than were their fathers. The child of to-day could find no interest in a curriculum in vogue fifty years ago; its mental horizon has been widened long before it enters the school, by external surroundings. The child to-day demands more, can grasp more and is more receptive to complex studies. The mentally backward and the intellectually delinquent child is, in most cases, physically deficient, and very often the sense of sight is responsible for the lack of power of concentration. The curriculum is not much at fault, nor is the method employed by the teachers to be severely condemned; the chief trouble is the failure of parents to acknowledge physical deficiencies in their children that will account for their intellectual dormancy. A physically normal constituted child should be able to stand the wear and tear of school life without any serious breakdown, and should be able to master approximately the subjects taught at school.

A small percentage, that are virtually deficient in their mental domain, whose intellectual powers are below par as a result of hereditary environment, must, of course, be excluded from this rather dogmatic statement. These children ought to be placed in special rooms, under the care of special teachers, as they will never keep up with their classmates, and it is, indeed, a moral obligation upon those in power to provide for these under-developed brains. But the majority of the so-called deficient children that can not keep up with the demands of the school, who fail to advance yearly, do not belong to this category; their mental power is not inherently below normal, but is inhibited by some physical abnormality that is remediable by therapeutic agents. It is for the physical healer to find this inhibiting cause and remove it. It is not enough to agree with Judge Sweeny, of Long Island City, in claiming that "the grinding monotony of school life makes criminals," for such assertion is not supported by sufficient evidence. The bulk of the children taken into consideration, a process of analysis will soon reveal the folly of such assertion. The majority of children bear school life well, pass their examination, and bring home good reports monthly, suffer very little physically, and do not turn criminals as a result of grinding monotony; it is rather the minority that constitute the backward and the deficient, and, of course, only a very small per cent of this minority virtually become criminals. It is not the grinding monotony that is responsible for even this small percentage of actual delinquents. A thorough examination will, in most cases, reveal a physical abnormality that is primarily the causal element in the production of these mentally deficient cases. Adenoids, nasal polypi, catarrhal conditions of the nose and throat; chronic otitis media, some trouble with the ethmoidal frontal and sphenoidal sinuses, rickets, etc., are potent factors in the development of disturbances of childhood, but, above all, it is the refractive state of the eyes that leads in the causation of various disturbances in childhood during the school period.

Every ophthalmologist of experience knows that many children who could not get along in school, who received bad reports, and failed to pass their examination, were simply hampered in their work because of a deficiency in their visual acuity which, while not apparent, could easily be revealed on careful examination. I often had the extreme satisfaction of knowing that the correction of an error of refraction had changed an apparently deficient, yet struggling child, into a bright, good, studious and successful pupil. But parents are not willing and strongly oppose the idea of glassing their children. Stupid and ignorant parents, and often even intelligent parents, will say, "Doctor, there is nothing the matter with my child's eyes," "My boy has very nice eyes," "My little girl shall not be dependent upon glasses." They can not see the relation of the eye to the nervous system, and fail to appreciate that the latent refractive condition of the eye overtaxes the child's nerve capacity, and bring about the physical and mental unbalance. Parents can often notice that their children are myopic, but are not capable of judging a latent hyperopic or astigmatic condi-

tion. As a matter of fact, however, most children suffering as a result of eye strain are not of the myopic, but of the hyperopic simple, compound or mixed astigmatic type. The medical school inspector, whose official duty is to protect the interests of these unfortunate sufferers, does not remedy the evil. As a rule, these inspectors are young physicians, who had little or no experience in the practice of ophthalmology, and, at best, a hurried examination, made with Snellen's test card, does not reveal a latent hyperopia or hyperopic astigmatism, so that we not infrequently find children with a three or four diopters of errors of refraction that have never been warned by the school inspector. Nor is it a rarity that parents should disregard even the oft-repeated warning of the inspector, and the children go on struggling along with the physical abnormality that retards their progress, making school life a heavy burden, which they are unable to bear, until the physical unbalance manifests itself in mental deficiency. A very important factor to consider in this connection is the baneful effect of the advertising refractionist. It is a conspicuous fact that children constitute a very small per cent of the office practice of the ophthalmologist, and a careful observation will reveal the fact that proportionally they are not found, to any large extent, in clinical and hospital practice. Far more often are they seen in the hands of the advertising optician, and I need not emphasize the fact that they are absolutely unable to refract correctly children without a cycloplegic. It is impossible for the optician to determine the precise error of refraction in children. They give glasses as a matter of course, and when the child is not benefited by them the parents become well-strengthened in their belief that they are not necessary. The child goes on suffering, struggling against a physical abnormality until the period of exhaustion manifests itself, and thus an apparent mentally deficient child soon becomes an acquired delinquent, too late to yield to any known method of treatment. Of late, these refractionists have taken advantage of the absence of laws regulating the practice of this ophthalmic branch of medicine. They are no longer to be found in the stores only selling glasses under the name of optician, but they ply their trade in private offices, with regular office hours, under the assumed title of doctor, and, of course, the unsophisticated can not differentiate them from the regular ophthalmologist. To them the sign doctor is sufficient evidence of a regular college diploma and State license. Thus the people are easily misled and the progress of ophthalmic therapeutics is retarded. The profession is largely responsible for this condition of affairs. There are, even to-day, medical men who do not think refraction to be a branch of medicine. As a matter of fact, they were not instructed in their respective schools on the subject, and many of them to-day send their patients to these advertising refractionists. The remedy is, of course, in the hands of the profession, and the ophthalmologic societies should try to remedy the evil as far as possible. Two methods suggest themselves to me, *i. e.*, the public press and proper legislation.

1. The public press, whatever may be said to the contrary, is a potent factor of education, and is always willing to enhance the interests of science. The newspapers may take no interest in factional fights, but their columns are always open for anything that concerns the interest of the public. Through their columns the public could be educated to know that the display of a big eye in the window does not constitute a college diploma, does not mean State license for the practice of ophthalmology. The public should be informed that these men are using the assumed title, doctor, under false pretenses, so as to ensnare the innocent public; that they are plying their trade at the expense of the public and to their detriment; that these assumed doctors know nothing of anatomy, physiology, pathology, physiologic optics; that they can not differentiate between weak eyes requiring glasses, and weak eyes requiring medical aid; that the proper function of the optician is to grind and adjust glasses, but not prescribe them. The press, I am sure, will open its columns, for the interest of humanity demands that these evils be eradicated.

2. The medical profession should request such legislation as will prevent this class of opticians, mostly ignorant for-

eigners, to use the title doctor unless so obtained from chartered, and by the State recognized, college. This is not class legislation; it is simply a law that will prohibit the abuse of the title, doctor, which some people use as a cover to defraud the public. With these evils remedied through the press and State legislation, the public would soon be educated to the fact that suffering children require the attention of experienced men. The interest of humanity, the interest of the profession, demands that these evils be remedied.

School children are subject to various disorders during school life as a result of eye strain. Headaches, dizziness, nausea, vomiting, choreic form movements, general debility, eventually resulting in anemia, irritability and nervousness, culminating in neurasthenia and hysteria, mental deficiencies, etc., are disorders attributable directly, in a vast majority of cases, to an uncorrected error of refraction which taxes the nervous system of the child beyond its reserve force. The family physician who, as a rule, is first consulted in these cases, should bear these simple facts in mind, and advise a careful adjustment of any error of refraction, not by a refractionist, but by a competent ophthalmologist, and he will save many children from the evil consequence of eye strain, which careless observers attribute to the grinding monotony of school life.

917 Spruce Street.

THE diagnosis of children's diseases can be gauged by the nature of the expression or cry. Thus, the cry of croup is hoarse, brassy and metallic, with a crowing inspiration; in cerebral disease, such as hydrocephalus, it is short, sharp, shrill and solitary; marasmus and tubercular peritonitis, by moaning and wailing; obstinate and long-continued crying indicates earache or a prick of a pin; pleuritic conditions are indicated by louder and shriller cries on moving the child, or effort of coughing; intestinal ailments by wriggling and writhing before defecation. The cry, as an indication, grows weaker as the loss of power wanes. Sometimes loud screaming tells of renal gravel. The *kind* of cry in the infant should be considered in making a diagnosis.

[Written for the MEDICAL BRIEF.]

The Medical Service in the Ohio National Guard.

BY H. H. SNIVELY, A. M., M. D.,
Lecturer in Obstetrics at Starling, Ohio, Medical College; Major and Surgeon Commanding Ambulance Company, Section No. 2, Ohio National Guard.
Columbus, Ohio.

There is a prevalent idea among the great mass of people, especially those who have given little attention to the subject, that in the event of war the United States could mobilize a large and effective army very quickly. It is no doubt true that there is sufficient patriotism, and whatever else it may be, to induce a large enlistment should such a need exist. It is just as true, however, that any large body of men thus hurriedly assembled would not be effective as an army until it had been carefully trained for some time, and during this time the burden would fall especially heavy upon the medical and sanitary organizations, and any mistakes of omission or commission would be paid for in suffering and death. In order to meet such conditions, Ohio, since 1898, has given considerable attention to the medical department of her National Guard.

This organization follows as closely as possible that of the United States Army, and consists at present of surgeons, assistant surgeons and enlisted men. There is one chief surgeon, viz., Lieutenant-Colonel E. C. Brush, of Zanesville, Ohio; fifteen surgeons with rank of major; thirteen assistant surgeons with rank of captain; twelve assistant surgeons with rank of First Lieutenant; one hundred and eighty-two enlisted men, of whom four are first class sergeants. These first class sergeants correspond to the hospital stewards of a few years ago.

These medical officers are assigned to regiments, troops of cavalry, batteries, signal corps, engineers, etc. Each regiment is entitled to a major-surgeon, a captain assistant surgeon, and first lieutenant and assistant surgeon; each troop, battery, etc., to a medical officer.

There are four sections of enlisted men in the State. Hospital Section No. 1, at Cincinnati, under command of Major

Hall; Ambulance Company, Section 1, at Toledo, under command of Major Ralph Stewart; Hospital Section, No. 2, Zanesville, under Major Drake; Ambulance Company, Section No. 2, Columbus, under Major H. H. Snively, commanding.

The State has now equipped each medical officer with an orderly pouch, which contains aromatic spirits of ammonia, six bandages, a pocket case, chloroform, catheters, diagnosis tags and pencil, four first-aid packets, sublimated gauze, jack knife, catgut and silk ligatures, common and safety pins, adhesive plaster, rubber bandage, scissors, splints, wire gauze in roll, hypodermic syringe, and vials of hypodermic tablets.

A surgical case, which is called a "field operating case," contains scalpels, scissors (straight and curved), probe, director, etc., and an "emergency case," which contains among other things, antiseptic tablets, bismuth subnitrate, caffein citrate, camphor and opium, compound cathartic, chloral hydrate, tincture of digitalis, calomel, ipecacuanha and opium, morphine sulphate, potassium bromide, quinine sulph., soda bicarbonate, soda bicarb. and mentha pip., soda salicylate, etc. A small set of instruments, hypodermic syringe and tablets, clinical thermometers, etc.

In addition, each section of hospital and ambulance company has equipment for a field hospital, in which equipment are chests: the so-called "Medical and Surgical Detached Service," "Medical Chests," and "Surgical Chests." The "Surgical Chest" in a brass-bound oaken chest, with padlock, in a canvas cover and hinged crate. This contains a very complete assortment of instruments and material for surgical work. The medical chests contain medicines and dressings, and the "Medical and Surgical Detached Service Chests" contain medicines, dressings, an instrument case, chloroform, etc.

For the equipment of a field hospital there are provided five units of bedding and clothing, and ten units of folding field furniture, commode chests, boxes of surgical dressings and hospital mess chests. A tent unit of bedding and clothing contains sufficient equipment for one hospital tent for six patients, or, in an emergency, for nine patients. It contains nine bed sacks, nine gray blankets, six rubber blankets, nine pillow sacks, one folding stool, six convalescent suits, six bath towels, and six hand towels.

The tent unit of folding field furniture contains one chair, six cots, six pairs mosquito bar frames, six spreaders for same.

The miscellaneous chests contain lanterns, folding chairs, folding tables, basins, buckets, brooms, etc., and are for the use of small detachments of hospital corps men when sent to small bodies of troops on duty at riots, or in case of emergency.

In Ohio, as in Illinois and Massachusetts, the hospital corps men and ambulance company men are enlisted in companies. The maximum for the Hospital Company section is fifty-one, and for the Ambulance Company section, sixty-nine. It is the aim to enlist in these company sections men of a high order of intelligence and morality, and they are given a carefully graded course of instruction, which includes anatomy, physiology, hygiene, bandaging, nursing, cooking for the sick, transportation of sick and wounded, care of emergency cases, establishing hospitals, keeping of records, and preparation of reports.

A high standard of professional ability is insured by a rigid examination of medical officers before they are given their commissions. However, these medical officers serving for the first time with troops in the field find the medicines and equipment provided for them, as outlined above, to be quite different from those which they have been accustomed to use, and for a time they are at somewhat of a loss to know what to do. This difficulty passes away when they have had an opportunity to become acquainted with the prescribed therapeutic agents. Again, there is a certain amount of work to be done in preparing the reports and keeping records. This is a bugbear to an officer who has had no experience in such work. He should at least know how to prepare papers, and how to instruct his non-commissioned officers in this art.

There can be no doubt about the wisdom of keeping such a training school for medical officers and men.

In case of hostilities, a considerable number of medical officers who have been trained in field work would insure against needless loss of time and life.

Certainly a medical man who is patriotic enough to give of his time and strength to preparing in peace for efficient service in time of war, is deserving of the greatest praise.

1368 North High Street.

[Written for the MEDICAL BRIEF.]

Medical Thoughts, Facts, Fads and Fancies.

BY JAMES S. SPRAGUE, M. D., C. M., ETC.,

Examiner Materia Medica and Pharmacology College Physicians and Surgeons; Ex-Examiner Medical Jurisprudence Trinity University; Author Medical Ethics and Cognate Subjects (Ideals in Medicine. In press). Stirling, Ontario, Canada.

The above is the title of many, yet not similar, contributions I have given, very frequently, to several medical journals, as it gives me the opportunity of the expression of thought in reference to many and divers medical interests that present themselves as worthy; in fact, essential to be presented for the adoption, criticism, or even rejection, by those among us who have professional honor, and who are in love with our profession, and are necessarily jealous when the fair and time-honored name or interest of medicine is in any way, or in any sense, insulted. This *furor scribendi* for nearly thirty-seven years has occupied most pleasurably my leisure moments, and it is gratifying to call to remembrance many instances of approval given me by those whose hands I can never touch, for death has claimed them, and by those so remote that only by chance we could meet. Such recompense has been, and is the only reward I have asked and expect, and gratifying it is that there is evidence—abundant evidence afforded to me that my labors, pleasant in themselves, are bearing fruit as regards recognition by those who behold with disgust said fearful ruin to our profession, the condition of our profession's blind adoption of purely non-ethical preparations.

Easy Marks, we have been termed, and no better or more appropriate designation could be given, and yet we have, or are supposed to have, the cultured discernment and scholarship of a judge—even of the highest courts—scientific knowledge demanded by no other scientist, skill such as no artisan or artist has in his dreams; fortitude, resolution, perception, sympathy, the heart within and the God overhead, recognitions and beliefs; altruism that no priest or minister exercises; and yet, with these heaven-born virtues blush, and, better still, daily called in exercise, with very little murmurings or signs of discontent—you, my brother, are called an easy mark. Such I am, and since my graduation, in 1869, I have been an auxiliary in the ranks, and it is in a manner consoling to think, while writing this brief paper, that every other brother, if not each brother, is a standard bearer, and, as regards his business or financial interests, he has the qualifications and history and belongings, not developed since his first decennial period, as regards age. The life history of those who, in the ranks, have stood shoulder to shoulder with me, fully indorse my statements, and when I recollect incidents connected with my long medical life, some are with no pleasure preserved, but I console myself with the thought, "That it is not all of death to die, nor all of life to live," and I lament that others with the most brilliant prospects, strengthened by the best training of our schools, are entering the field, and, after a few decades in practice, their histories will be of those who have fought the good fight in medicine.

However, there are decidedly pleasurable reminiscences of very early medical practice in the State of Iowa, during which I was closely associated with congenial and fraternal spirits, whose many virtues and excellences of character and personality I recall, and I bring to memory the lines of Crosby when I think of each one, long since departed:

> But to live—every day to live out
> All the truth that he dreamt.
> While his friends set his conduct with doubt
> And the world with contempt.
> Was it thus that he plodded ahead.
> Never turning aside?
> Then we'll talk of the life he lived—
> Never mind how he died.

Before me, with your compliments, and letter requesting me to present this paper,

there is present in the list of frequent contributors to THE MEDICAL BRIEF for 1903, the photogravure of our—dear to me, and dear to all who love our profession—need I name it? Such is that of Dr. Ben. H. Brodnax, Brodnax, La., an humble village doctor, who never, in his many contributions, mentioned or indorsed a quack preparation, but urged all of us to adhere to well-established and well-known and official remedies. That he was, although living remote from the crowd, so, fortunately, not influenced by the banal literature of our medical journal advertisements, is, indeed, a mystery, but, judging from the correspondence I had with him during several years, one could easily find out he was not an easy mark for the fakir advertiser. I may here state that no writer for the medical journals has left a better record, and his influence will be lasting for the honor of medicine. However, he died poor. Had he been associated with others who claim *professor* in their titles, and had added LL. D. or Ph. D.—cheaply earned or purchased—would his honest labors have been more appreciated? No! We country doctors swore by what Dr. Brodnax wrote, and although dead, he speaketh in no uncertain words to the effect that official drugs are all that is necessary to us, provided, we well know their full and therapeutic actions.

If there is a name worth placing in the New York Hall of Fame, that name is the name of Ben. H. Brodnax, M. D., Brodnax, La. Need I say that the name of Cyrus Edson, M. D., is equally worthy of so honored a place?

These men I honor, for they never indorsed a patent dope.

My Iowa State Board of Medical license hangs on my walls, and the name of the President of the State Board is thereon inscribed, but when I behold before me this testimonial, named in a proprietary booklet, I consider the *easy marks* are not yet all dead, and I reflect that the greatest enemies our profession has are those of its own household.

Are the labors of N. S. Davis, M. D., LL. D., the founder of the American Medical Association, as regards the study of ethics, as related to medicine, been so little studied and held up so poorly to our profession, that our greatest enemies, quacks and quack medicine compounders, are asking us to certify to the merits of their worthless mixtures, announced in medical journals? Certainly, he who styles himself M. D. is deficient in the most elementary studies of *materia medica* and pharmacy who buys and recommends a dollar-an-ounce mixture—whose composition the ordinary druggist knows—that can be equalled for less than one-fourth of the money outlay. Yes, we are easy marks, for while we are engaged in the higher studies our enemies, the hangers-on to our profession, are actually undermining the temple of medicine, and are even inviting us, the innocents, to assist, and, strange to say, they obey the call, and even there are volunteers. Are you all innocent, readers? If you are an easy mark, or have been an easy mark, take a few moments for self-study; anyway, do not disgrace yourself and medicine, for there are too many who have done so, and have spilled much ink in the act. If this paper appear, I promise to present to the honest readers of this journal further indorsement of my views, fully believing in this, that "united we stand, divided we fall." That every M. D. should know his medicines and their components, as well as their therapeutical actions, and that to recommend a quack, or unknown compound, is decidedly unprofessional and contrary to the principles and teachings of ethics in medicine.

T. A. Daly, of Philadelphia, gives a beautiful sketch of the relationship of priest and doctor:

Padre Domineec McCann
He ees great beeg Irishman.
He ees growla when he speak
  Like he gona go for you
  Jus' for busta you in two.
My, he talk so rough, so quick.
  You weel wisha you could be
  Som'where elsa w'en you see
    Padre Domineec.

Padre Domineec McCann
Stop at dees peanutta stan'
W'en my leetle boy ees seeck:
  Talk so rough he make me cry.
  Say ees besta boy should die
So he go to heaven queeck;
  He ees speak so cold to me
  Nevva more I wantsa see
    Padre Domineec.

Den gran' Doctor com'. Ees queer.
When I ask who sand heem here.

He jus' smile an' weel no speak
Only justa for to say:
"You no gotta cent to pay,
I gon' feex dees boy dat's seek."
Oh, beeg hearta man an' true,
I am gettin' on to you,
Padre Domineec McCann.

The greatest enemies, Oliver Wendell Holmes says, we have, are old women and preachers, when the indorsement of patent medicines are considered, and I may add, charms and various incantations. However, the above poem illustrates that there are exceptions, and noble ones. If every minister, instead of recommending a patent medicine to his disciple or parishioner, would direct him to the doctors, we M. D.'s would respect these "guides of faithful souls" much more than is the custom among us.

[Written for the MEDICAL BRIEF.]

Senility.

BY W. E. PUTNAM, M. D.,
Ex-Surgeon-General of Vermont.
Bennington, Vt.

The period of development, that of middle life, and that of physical decay, constitute the three great epochs of human life.

Under the first division is included the whole time from birth, up to about the twenty-fifth year, during which the vegetative organs and those of the lower animal life are consolidating. The central nervous system is more slow in reaching its highest development, and the brain, especially, is many years later in acquiring its maximum of organic consistency and functional power.

The middle period of life, between about the twenty-fifth and forty-fifth year, is the time that the individual is subjected to the greatest pressure from external causes. The industrial classes are absorbed in the struggle for maintaining themselves and their families; the rich and idle are immersed in dissipation, or haunted by the mental disgust it excites. At the same time, the women are going through the exhausting process of child-bearing, and are either surrounded with the cares and duties of a poor household, or equally pressed with anxiety to attain positions for themselves and their children in fashionable life, or they are idle and heart-weary, or forced to an unnatural celibacy. Frequently, they are both idle and anxious.

The period of decline may be said to commence when the first indications of distinct physical decay manifest themselves, and when a new set of vital conditions come into force. There are not, however, any sharp lines of demarcation between the epochs thus sketched; the one insensibly growing into its successor.

Although the activity of the growth of the organs in childhood and youth offers a striking contrast to their decline in old age, there is, notwithstanding, a resemblance in the diseases of the two extremes of life, like the "tints of the rising and setting sun." Infantile convulsions and senile convulsions, infantile diarrhea and senile diarrhea, infantile eczema and senile eczema, uric acid deposits in childhood and the same in old age, may be adduced as illustrations of the resemblance of the diseases affecting the two extremes of life. In the early period, the constitution has not acquired its vigor; in the closing, it is losing it.

To the mere worldling, old age is repulsive; but when life has been spent wisely, errors corrected, the heart disciplined, and the intellectual and moral powers are in the ascendant, old age presents a spectacle happily described as "a crown of glory." A human being who, after fulfilling all the duties of life, is still living in a "green old age," whose eye is not dim, nor his natural force abated, though ripened for the future, may well command our admiration and veneration.

The decay of nature is *gradual*, and does not affect all the structures of the body equally at the same period; it also begins in some at a comparatively early, and in others not until a considerably advanced period of life. The following are illustrations of the changes attendant upon old age, and they exercise an important influence in accelerating that final one which is the common lot of humanity.

As age advances and senile changes gradually take place, the mental faculties partake of the general deterioration. That the mind retains its vigor and clearness of perception, while the body undergoes decay, is a poetic fiction; the brain shares

inevitably in the physical disorganizations to which the aged are subject. The various forms of man's decay are gradual and progressive. Death may take place suddenly from some form of heart lesion, apoplexy, rupture of an aneurism, etc., but it is only the termination, not the disease, that is sudden. For years before the fatal issue the organ was undergoing degeneration of structure.

The climatic conditions of winter are highly favorable for the discovery of all kinds of weaknesses and tendencies to organic disease, especially of the brain, heart, blood vessels, kidneys and liver. Facts on a large scale prove that defects in these organs manifest themselves most frequently and severely in cold weather. The whole constitution is lowered by the conditions of winter, and, to an extent, devitalized.

Medicine can only exercise an indirect power over these conditions, by prescribing such remedial or preventive measures as artificial heat, clothing, food, etc., to forestall, if possible, the effects of cold, and to counteract any of the organic changes that are sure to occur.

In alluding to the decay of nature, I would refer rather to the vital decay of individuals, than to the mere lapse of years; vital conditions can not always "be measured by number of years." It is well known that some people at fifty, or even earlier, are, in this respect, older and more shattered in constitution than others who have attained the age of seventy or upwards.

Our present manner of life, business haste and anxieties, tend to induce premature decay. Probably, as the result of improved sanitary measures, of a more correct and general recognition of the laws of health, the attainment of a vigorous old age without the premature feebleness and decay hitherto so generally observed, will be more common.

Treatment of the Aged.—There are many ailments peculiar to the approach of old age, which require special medical treatment, or the application of particular measures, in which the timely use of appropriate remedies, and the prompt employment of judicious means, are often rewarded in seeing the flickering flame rekindled, and valuable life considerably prolonged. I will touch upon only two or three points.

Food.—Food should be of much less solid form than during the vigor of adult life. Just as nature provides fluid food during infancy, before the teeth appear, so the loss of teeth, a common attendant upon old age, necessitates a return to a form of food that requires little, or no mastication. Inattention to this point is, I believe, a fruitful cause of much of the indigestion, weakness, and suffering of the aged.

Frequently, artificial teeth can not be tolerated, and the only path of safety lies in the adoption of an almost exclusive fluid diet. Some vigorous old people, who can wear comfortably artificial teeth, seem to thrive upon a more generous diet, in which solids form a part.

Rest is essential to the health and safety of the fragile frame of the aged. The sports and exercises of youth, or the exertions of maturer age, would fracture the bones, rupture the tendonous portions of the muscles, or occasion a blood vessel to give way; hence the folly of old people trying to emulate the stunts of the younger generation.

To the aged, long-continued exerise and too little rest are highly unfavorable, the reparative processes being only slowly performed. Fortunately, the activities and athletic exercises of youth become distasteful to old persons, and the burdens of mid-day life are transferred to the succeeding generation, and they now seek and enjoy a condition of quiet and repose necessary to their present well being.

Warmth.—In the winter season, when sudden changes of temperature are frequent, provision should be made for preventing the ingress of the cold early morning air, and for maintaining a suitable temperature in the bedroom through the whole night. The temperature of the sleeping apartment should be 60° to 62° F. It, no doubt, often happens that the lonely encounter with death takes place in the stillness of the hour before sunrise from a sudden access of cold air, which the extreme feebleness of old age could not resist or endure

As before stated, cold seriously affects the aged, and it is a fact which excites frequent observation, that soon after the

setting in of severely cold weather, the obituaries in the public press of persons in advanced life become unusually numerous.

That the coldest portion of the twenty-four hours, as a rule, and also the period of minimum vitality, is just before daybreak, is a fact full of warning to the aged, and to the feeble generally. How often has it been observed that the setting in of grave, or immediately fatal symptoms, has coincided with this daily recurrence of cold. When nature, refreshed by sleep, is summoning new energies in the young and robust to meet the exigencies of the coming day, the aged and infirm succumb in the greatest numbers to a depression which has been too deep and too prolonged to admit of any rallying. This fact gives force to my recommendation of striving to keep the bedrooms of old people at an even temperature, to neutralize, as far as possible, the consequences of this low temperature wave.

It is often advisable for the aged to take nourishment during the night, to tide him over the period of greatest exhaustion. Persons in health may be able to take sufficient food at a time for ten or twelve hours, but such a practice would be out of the question with the old, or the invalid.

In regard to medicines, I will offer no definite suggestions. The selection of remedies must be determined strictly according to the symptoms the patient may present, modified by any idiosyncrasy of constitution. They are, however, often of the greatest value.

124 South Street.

[Written for the MEDICAL BRIEF.]

Acron, the Chief of the Empiricists.

BY BROSE HORNE, M. D.,
Late Indiana State Prison Physician.
Gas City, Indiana.

All non-conformists will be interested in the life of the ancient physician, Acron. In his day the Pythagorean Society was the ruling class. We all admire a man who stands out boldly for what he thinks is truth, even if by so doing he is persecuted by those in power. In all ages we have persons whom, possibly, history neglects to speak about, that have manifested wonderful powers in assisting progress. This ancient physician, Acron, *was not* a member of the Pythagorean Society, but at the same time was more successful than any of the physicians of his day. Acron was made of the "proper stuff." He refused to be bound by any organization, creed, or ism. *He was a non-conformist.* All great men are non-conformists. The soul of things protests against being bound down to this or that theory. "Away with your theory! Let me cure my patient!" say all men, from Acron down to the modern non-conformist. Acron, the blessed, was a child of nature. He obtained his knowledge by *observation* and *experience.* He lived with the *plants of wild nature,* ever ready to learn lessons from the birds of the air, or the trees of the woods. We are interested in Acron because he is the father of true empiricism. The first to advocate the cause of a man without a school. He was able to defend himself against all of his rivals, and stood shoulders above the Pythagoreans, Empedocles, Alconœon, and all. This ancient anti-philosopher had the bravery and honesty to refuse to accept—and even combat—every species of physiological theory. He insisted upon *pure experience* only. None of his rivals knew where he obtained his knowledge, although they admitted that the man had a superior education. They were aware that he did not obtain it from Pythagoras, so all they did know was that he was able to meet them and hold his own. He was even acknowledged to be a master in his art by his rivals. Acron was the product and follower of the art of instructive therapeutics. His mind was ever looking for the particular diseased condition, irrespective of the name, so his remedies could meet the condition and correct it. Let us honor the chief of the true empiricists—he who would dare challenge the philosophy of his age. Although history gives this man very little, if any, notice, still a few fragments of his work have been handed down to us. Acron, speak to this century, and let your words thunder through all eternity: "I reject every species of physiological theory, and insist upon the value of pure experience only."

This man was a true empiricist, not an empiricist that treated named diseases. You speak of your Cullen, or your Hahnneman, your Hippocrates—why Acron is as far superior in principle, as Love is from Hate. At this man's door you can not place prejudice, schemes, dishonesty, trickery, false doctrines, murder and lies. No! He was a non-conformist, fighting for truth with honest weapons. His faith has been kept alive all these years by the shedding of blood by the poor, but righteous minority. If a reformer has ever lived he owes his existence to Acron, the one who survived and flourished about five hundred years before the birth of Christ. A success in practice, a success in life. The honest man, Acron of Agrigentum, who believed in doing unto others as one would have others do unto them. A man who dared assert that what he believed to be truth, to fight for it, even if all the organizations, laws and customs of the day were against him. Acron cured people with remedies, while the Pythagoreans—or predominant school—was quarreling over theories, and endeavoring to form a monopoly. Philosophy and dreaming were their habits and life, and practice, with results for good, were his.

Acron is dead. Long live Acron!

[Written for the MEDICAL BRIEF.]

Memorial on Medical Language Presented for Consideration to the Rectoribus Magnificis of All German Universities Convening in Marburg, July 31, 1907.

BY DR. ACHILLES ROSE,

Adjunct Professor of Medicine at the New York Post-Graduate Medical School.
New York City.

(Continued from page 691.)

In discussing the motion, the following observations were made: In recent times physicians of Western Europe have introduced new names into medical science, in order to designate new conceptions resulting from new discoveries and inventions. The greater part of these designations is taken from the Greek language, but most of them are incorrectly constructed, are incorrectly chosen. The Medical Society of Athens therefore desires to assist to the best of its ability in the establishment of a classic Greek medical nomenclature, which should serve as a guide to those men of science who avail themselves principally of the Greek language for scientific expressions. To carry this object into effect, it is proposed to collect all those irregular terms which have been introduced into medical literature, and to replace the same by classic Greek appellations. Such a compilation of corrected expressions, once definitely approved, will check the confusion which has existed and continues to exist in medical onomatology.

The first word mentioned as an example was phagocyt, which by some is called phagocyttosis, by others phagocytarosis, and by others still cyttarophagia. In such cases the committee will select the one best suited to express the intended meaning, so that in future it may be uniformly used by all authors. The authors who are at present perplexed as to which of the various denominations to use, will thereby be greatly relieved.

It will be seen that this discussion confined itself to the formation of new words for new conceptions. This is intelligible by the fact that the corruption of old-established Greek words occurs only in the medical literature of foreign countries.

In order to show how far this corruption really goes, I may be permitted to cite a few drastic examples from the German and English medical literature.

Abarthrosis, hermaphrodite for anarthria.

Abdominohysterectomy, likewise a hybrid for laparohysterotomy, Ἐκτομή means castration, and this is not modern, but ancient Greek, besides, the preposition *ex* can not be placed in the middle of a word. (Excision means ἀποτομή, but τομή may also be taken to signify amongst others excision.)

Abdominoscopy, a hybrid for laparoscopy.

Abepithymia is supposed to mean paralysis of the solar plexus. Grammatically correct, it would be anepithymia, but the term is not sufficiently distinctive, and therefore unscientific.

Abrachia is supposed to mean absence of the arms, but means in reality absence of rocks. The arm means *βραχίων, ονος*. The correct expression would be abrachionia or lipobrachionia (from *λείπω*). *βράχος*, rock, does not exist in any school dictionary, but is nevertheless good old Greek.

Acephalaemia defies explanation.

Acne is a word which does not exist in any language outside of medical slang; the Greeks call that particular affection acmai.

Acromicria is incorrect, likewise acromegaly, chiromegaly, splenomegaly. The correct terms would be mikakria, megalakria, or megakria, megalochiria, etc.

Actinogram is ungrammatical, the Greek word is *ἀκτινογράφημα*.

Aktinomykosis is ungrammatical, it should be actinomyketosis (*μύκος μύκητος*).

Akyeteria, recte akyteria (*ἄκυτος*).

Akystonervia is hybrid, and without meaning.

Adenektomia, adenektopia, doubly wrong.

Adenia, adenopathy, adenosis, are superfluous. Adenitis means affection or inflammation of the gland or glands.

Adnexitis is, similarly to appendicitis, to discard as puerile corruption.

Adynamia and asthenia are by no means synonymous, although they are frequently used so. In antiquity already asthenia was understood to mean illness, corresponding to our word infirmity.

Albuminometer instead of leukomatometer.

Amyatrophia and also amystrophia should be called myatrophia.

Anaemia is unscientific whenever oligaemia is intended.

Appendicitis. This barbaric word is significant for the puerile manner in which new words are formed, and does not constitute an honor to medical literature. Perityphlitis, as the affection of the vermiform appendix was called by our grandfathers, is an excellent, anatomically correct designation. The words ekphyaditis, epityphlitis, skolekoiditis, which non-Greeks have concocted with the aid of the school dictionary, are unscientific.

Arthropathy is superfluous, arthritis being the suitable Greek description of articular affections.

Asystolia is incorrect, if it is intended to speak of dyssystolia.

Atonia means absolutely nothing else but relaxation; it does not mean weakness or insufficiency, as some authors will have it.

Autodigestion is hybrid (analogously to automobile, which is called, in Greece, correctly autokineton). Autodigestion should be autopepsia.

Blepharoptosis should be blepharoptosia. (The grammatical rules about the terminations is and ia in compound words do not seem to be known to our nomenclators, as they use haphazard one or the other.)

Brachialgia, recte brachionalgia.

Bronchiectasia is ungrammatical and ugly.

Bronchorrhoea, judging by the word, the bronchus would run away.

Cavernitis. A word formation such as this makes the impression of being the work of a schoolboy or a jester. The correct word would be serangitis; similarly: Cellulitis instead of kyttaritis; here also belongs—

Cerebritis, instead of enkephalitis.

Chlorosis, recte chloriasis.

Cholecystitis and cholelithiasis are incorrect; they should be cholocystitis and chololithiasis. The adjective choledochus is correct.

Chthonophagia. It is surprising that such a word should have been formed so difficult of pronunciation, when the classic designations geotragia and geophagia exist.

Claustrophilia and claustrophobia are hybrid. The Greeks have the words philokleisia and kleisiophobia.

Conjunctivitis. Berlin lexicographers have complained of this hermaphrodism, regretting their inability to find a true Greek appellation. Their Helenophobia seems to prevent them, however, from consulting a latter-day Greek book, in which they would have found epipephykitis.

Corneoblepharon, recte Keratoblepharon.

Deferentitis, Greek spermatodochitis.

Dermatonosis is superfluous, because dermatitis is all-sufficient.

Diplakusis, recte diplakousia.

Duodenitis, recte dodekadaktylitis or dodekadaktylonitis.

Dysarthrosis, recte dysarthrosia.

Dysthyreosis, recte dysthyredeosia.

Ektasia, recte ektasis.

Epikia is supposed to mean house-disease, but really means colony.

Epoöphorectomia. German scientists assert that ovary means oophoron in Greek, although in Greece this word designates an animal that lays and hatches eggs, analogously to the words leophoron (signifying traffic road, avenue), and nekrophoron (hearse). The ovary means ootheke (egg store). It is possible that this word does not occur in classical literature, because the ovary was not mentioned or described there, but oophoron is the classical word for ovipar. I am somewhat explicit on this point, because I have had difficulties to offer the explanation.

Ovariotomy is oothekotomy, oophorectomy is a conglomeration of barbarisms.

Folliculitis, recte thylakitis.

Gastroectasia, recte gastro-ektasis..

Gastrectomy, recte gastrotomy.

Gastroenteropathy is simply gastro-enteritis.

Gastrohelioma is unnecessarily long; gastrelioma is sufficient.

Gastromegaly, recte megagastria.

Gastroptosis, recte gastroptosia.

Gastrorrhoea, literally the stomach or abdomen running away; what is meant is chylorrhoea.

Gastrosucorrhoea. Greek at both ends, Latin in the middle. Our grandfathers called it chylorrhoea gastrica.

Geromorphismus, recte gerontomorphia; Galen called it rhytidosis.

Haemophilia, recte philhaemorrhagia.

Hepatoptosis, recte hepatoptosia.

Hypoaemia; the better word is liphaemia.

Hypoglobulia is hybrid; the correct word is lipokytaemia or lipokythaemia.

Hypotrichosis, recte lipotrichia.

Hysterectomy, recte hysterotomy.

Hysteromyomectomy, recte hysteromyomotomy.

Ichnogram, recte ichnographema.

Idiotism, idiocy and idiotia are incorrectly interpreted in our onomatothesia. Idiotism refers only to pathologic disorders of language. Idiocy (*ἰδίωσις*) means peculiarity in general, and not necessarily pathologic, What is understood in our medical literature by idiotism, means in Greek *μωρία*; what we call an idiot means in Greek *μωρός*. Imbecility also means *ἠγιθιότης*, but this word is less usual in Greek medical onomatology.

Iridectomy, recte iridotomy.

Iridoptosis, recte iridoptosia.

Jejunitis belongs to the barbarisms of the appendicitis kind. Jejunum means *νῆστις, ιος* or *ιδος*.

Karyokinesis, properly translated means nut movement; what is meant is pyrenokinesia.

Laryngorrhoea—even the larynx does not run away.

Lupotom is hybrid, the correct word would be lykotom.

Mediastinitis, recte mesothorakitis.

Misoneismus, recte misokainia.

Mycoderma, recte myketoderma; mycologia, recte myketologia; mycosis, recte myketosis.

Myokymia, recte myokymatia.

Nekrodermitis, recte nekrodermatitis.

Nekrospermia, recte nekrospermatia.

Nephrectomy, recte nephrotomia. One of the most objectionable new formations for which the well-known kidney operator, Edebohls, is responsible, is—

Nephrokapsektomia; the renal capsule means epinephridion.

Oophorectomy, recte oothekotomy; oophorectomy, literally translated, means castration of an oviparous animal or all the oviparous animals. Oophoritis is oothekitis.

Orchidomeningitis, recte orcheomeningitis. There are *ὀρχις, εως* and *ὀρχίς, ίδος*: the former is testicle, the latter a plant.

Orchidopexia, recte orcheopexia.

Otomykosis, recte otomyketosis.

Otorrhoea—also the ear does not run away.

Ovarialgia, recte oothekalgia.

Pachyvaginitis, recte pachykolpitis.

Papillitis belongs to the barbarisms of the appendicitis kind. Papilla means *θηλή*.

Paraphrenitis is grammatically correct, but unscientific; what is meant is pardiaphragmatitis.

Peri-appendicitis. What is probably intended is paratyphlitis.

Peridectomy. It is impossible to say what this word is intended to convey.

Perivasculitis, recte periangionitis.

Pest means in Greek πανώλις, but that is not modern Greek, as our dictionaries assert; it occurs already in the ancient classical literature.

Phrenitis is not inflammation of the diaphragm, but a synonym of phrenopathy and phrenoblabia.

Psychosis means imparting a soul, life, animation, infatuation, but not as is stated in German, English and French literature, aberration of mind. I have repeatedly written on this error in detail.

Placentitis, recte plakountitis. The latter word has been erroneously called modern Greek.

Plicotomy is hybrid, recte ptychotomy.

Prostatorrhoea. Even the prostate cannot run away.

Pubeotomy, recte hebikotomy.

Pupillostatometer. Pupil means κόρη.

Radiography is correct, if it refers to radium, the metal; but wrong if it refers to aktinography. There is much confusion in consequence of the incorrect word-combinations with radium, so that it is sometimes impossible to know whether the subject deals with treatment by Roentgen rays or radium, if the term radiotherapy is employed.

Scarlatina means in Greek ὀστρακιά, and not as is asserted by German dictionaries σκαρλατίνα.

Stomatomykosis, recte stomatomyketosis.

Strumectomy, recte tongronotomy.

Strumitis, recte tongronitis.

Tenalgia, recte tenontalgia; tenorrhaphia, recte tenontorrhaphia; tenonsynovitis, recte tenontosynovitis; tenotomy, recte tenontotomy.

Terminology is hybrid. The Greek word is onomatology; to give a name is ὀνοματοθέτω, a nomenclator ὀνοματοθέτης, the giving of a name ὀνοματοθεσία and the naming ὀνομασία.

Tonsillitis, recte amygdalitis.

Tuberculosis is hybrid. The Greeks have the word φυματίωσις from φυμάτιον tubercle.

Urethrorrhoea is an impossibility.

Vaginism, recte kolpospasm.

Vulvitis, recte aidoiitis.

It has been objected that the medical onomatology should not be taken from modern Greek, but this objection falls to the ground, because our Greek brethren employ no modern Greek in their medical onomatology at all. Whatever "modern Greek" is in use in medicine, is made in Berlin (polypragmasia), or in New York (appendicitis), or in Naples (misoneismus).

In conclusion, I may be permitted to give it as my opinion that the works of the two Greek philologers, Hatzidakis and Papademetracopoulos, on the connection between the Greek of to-day and that of the classic period are of no less importance to science than the excavations of Schliemann and his successors.

[Written for the MEDICAL BRIEF.]

A Brief Resume of the Musculature and Fascia of the Pelvic Exit.

BY BYRON ROBINSON, B. S., M. D.,
Chicago, Ill.

(Continued from page 734.)

These ligaments are a part of the musculo-fascial support of the pelvic viscera. The vaginal tube supports the uterus by being well embraced by the levator ani fascia proximal and the levator ani muscle, and also by being well padded and surrounded by fascial planes of connective tissue fixed in its walls and adjacent structures. Fat pads and acts as a support by stiffening folds. The fact is the viscera are suspended by supports—ligaments, mesenteries—and supported by walls—muscle, fascia.

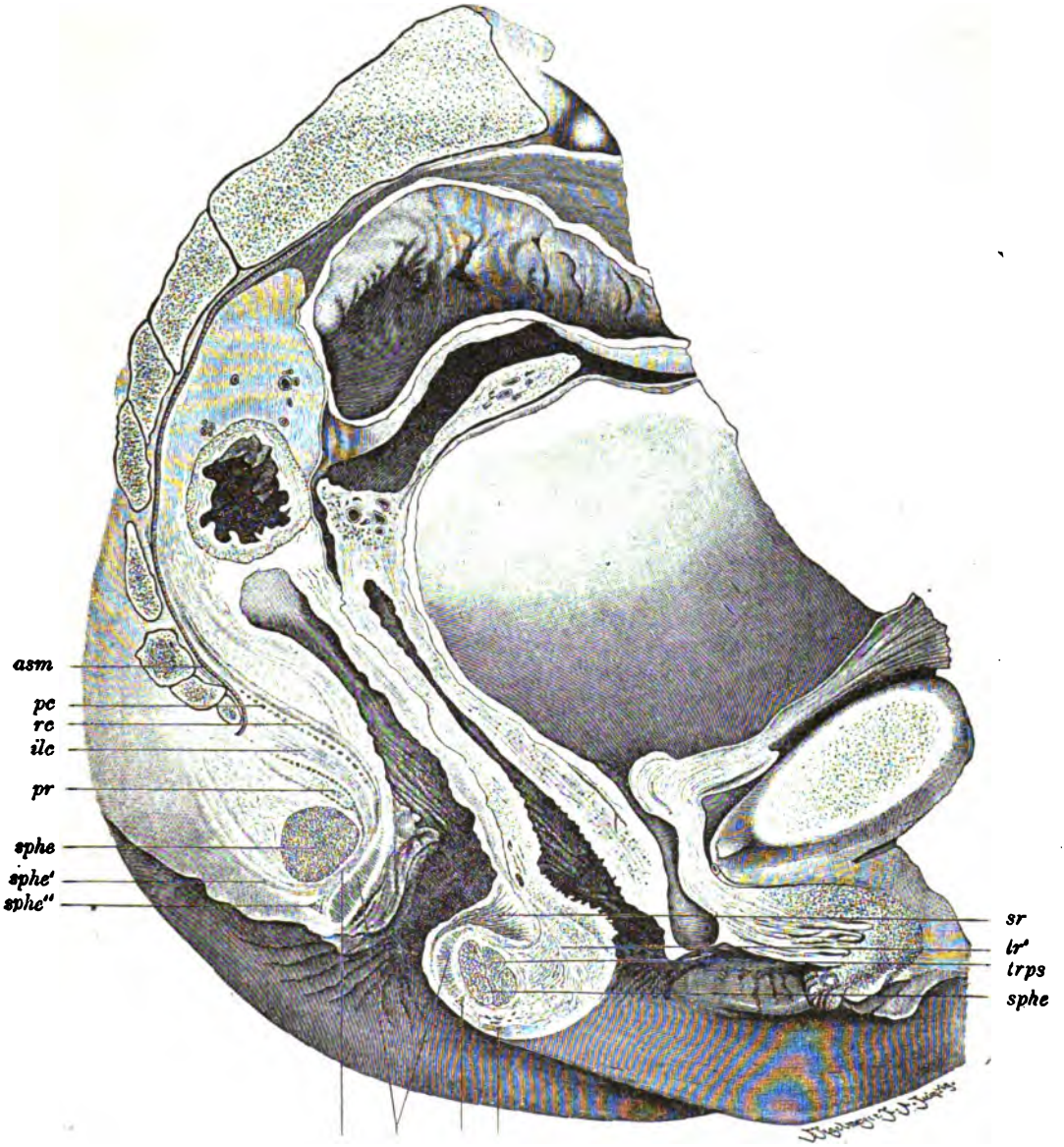
In colpoperineorrhaphy, it is well to remember that we have a fixed pelvic segment and a movable or displaceable segment. It will aid in repair. The movable pelvic segment comprises the urethra, bladder and vaginal walls. This segment is bound together by peritoneum on a very mobile base and by a considerable mass of loose connective tissue.

This segment becomes displaced by labor, distended bladder, vagina or rectum. If its fascial connections become torn, sacropubic hernia is inevitable. The fascial connections are considerable, proximalward to the pudendum, consisting of

the levator ani fasciæ proximal and distal and to some extent of the levator ani muscle. Sacropubic hernia, arising from lacerated fascia of the movable pelvic segment is recognized by the vagina and bladder bulging distalward at the pudendum and making the pudendum appear as a waist with the puckering string gone. The worst and most damaging cases of laceration are those which begin from proximalward and progress distalward, *i. e.*, the fascia begins to tear well proximalward in the rectovaginal septum on the sides of the bladder and vagina. These are the cases which present distressing symptoms; when standing are worse on account of disturbed circulation and are pronounced "prolapse" by the general physician. In such cases the ventral vaginal wall appears first at the pudendum then the cervix and finally the dorsal vaginal wall. The bladder gradually sags distalward and difficult urination is added to the already existing train of symptoms. In lacerations of the sacral segment of the pelvis the lesions are more visible. The perineal body suffers especially. It straightens, extends the fixed sacral segment and retroversion and inevitable subsequent sacropubic hernia results. The visible laceration of the perineal body was originally considered the chief requisite for repair and also the type of colpoperineorrhaphy. But the study of the pelvic fascia shows why the operation failed or succeeded. Frequently it may be observed that the perineal body is visibly torn, but no evil consequences follow, because the pelvic fascia remains intact. The rectum belongs to the fixed segment. It does not prolapse, but its wall stretches, elongates, expands, distends. As the advancing head forces ventralward and tears the levator ani fascia proximal and distal as well as the ischioperineal ligaments, the levator ani muscle also becomes deranged, but practically the restoration of the fascia restores the muscles. The muscular layers of the pelvic floor are two—superficial and deep connected—and blended at the perineal body both by the muscular and fascial relations. The deeper layer is the levator ani muscle which is directed distalward from the sides of the pelvis in the form of a boat or bowl to its attachments on the pelvic floor. The superficial layer consists of the transverse muscles of the perineum, which extend from the tuberosities to the center of the perineum and also the bulbocavernosus, which surrounds the vaginal outlet. All the muscles are related to fascia as the levator ani inclosed in double blades of fascia, *i. e.*, the levator ani fascia proximal and distal. The deep transverse muscles lie between the triangular ligament and Colles fascia. The bulbocavernosus and superficial transverse muscle lie between the two superficial perineal fasciæ. The ischioperineal fascia is but the thickening of the distal or dorsal border of the triangular ligament and Colles fascia. The significant importance of the fascia of the pelvis becomes at once apparent, not only in maintaining the integrity of the pelvic floor, but in all repair of the same. The pelvic fascia is the chief element in maintaining perineal muscular relations. The pelvic fascia may be divided into deep and superficial layers, according to the deep and superficial layers of muscles. The deep pelvic fascial layers are united to the more superficial pelvic fascial layers in the perineal raphe, maintaining the pelvic fascia as a unit. The superficial fascial layers of the pelvis are attached from the ischial tuberosities to the pubic rami and extend across the ventral pelvic outlet except at the pudendal orifice. Fascia may be lacerated without its associated muscle being lacerated. In perineal laceration the muscles lying between the fascial layers may become separated as to loops, bundles or as to the attachments of one or both ends. Also the fascia of the levator ani muscle may be lacerated in different localities and this allows incomplete repair.

When the muscular layer between the fascial layers separates, the muscular fibers retract irregularly toward the proximal or rather stronger end, leaving apertures which are difficult to effectually repair. The rupture and retraction of the levator ani with its fascia makes the deep sulcus found on each side of the projecting rectocele, because the fibers of the levator ani retract laterally toward the pelvic walls. It is evident there is a

deeper factor in perineal walls. It is evident there is a deeper factor in perineal lesions than visible lacerations. The deficiency in perineal lesions is not in proportion to the apparent extent of the injury. Every physician has noticed multipara with considerable external laceration of the perineum, with apparently lit-



A LATERAL VIEW OF A LONGITUDINAL (SAGITTAL MEDIAN) SECTION OF A WOMAN'S PELVIC MUSCLES.

FIG. 16. This drawing is made from a hardened female pelvis dorsal to rectum. The arteria sacralis media may be observed (asm), musculus recto-coccygeus (rc); (pc), musculus pubum coccygeus; (ilc), musculus ilio-coccygeus; (pr), musculus pubo-rectalis; (s), sphincter recti et vaginæ; (lr), fibro-elastic network arising from the elastic terminal tendons of the longitudinal rectal muscles and from the distal border of the muscles of the pelvic diaphragm which course to the skin surrounding the anus, partly toward the dorsal surface of the coccyx (sphe') as ligamentum ano-coccygeum; (sphi), musculus sphincter ani externus; (sphe), musculus sphincter externus profundis; (sphe'), musculus sphincter ani superficialis; (sphe''), musculus sphincter ani subcutaneous; (sr), musculus sustentator mucosæ—longitudinal bundle.—Ruedinger (after Holl).

tle discomfort, and with the pelvic organs but sightly disturbed, while in other cases with slight apparent lesions, complaints are serious, grave. I have seen extensive visible lacerations with almost no complaints and apparent health. Again, we may observe cases when the perineum does not appear lacerated, but the prolapsed vagina, the projecting rectocele and vesicocele appear at the pudendum in a remarkable degree. In fact, as Dr. Emmet remarks the pudendum looks like a bag which has lost its puckering string. There is a different explanation for each of the above classes. In one, the pelvic fascia has suffered in the lesion, and in the other, only a few muscle loops and possibly the perineal body. When the lesion involves the pelvic fascia its consequent result is that the circulation is deranged seriously because the vessels are held in definite relations by the fascial planes, hence the discomfort on standing and exercising is from congestion, deranged circulation and nerve laceration or trauma. Baker Brown simply united the torn tissue at the vaginal outlet. Seldom does this simple measure afford relief from perineal laceration, for subjects with such visible slight traces suffer but little. In general the operations for the relief of perineal laceration are a failure, if the rectovaginal septum (fascia and muscle) be not included within the grasp of the deep sutures success will not be obtained even though the pudendum be closed. The secret of Emmet's success lay in the denuding of the vaginal septum, *i. e.*, utilizing the tissue dorsal to the vaginal wall. In fact, if the levator ani fascia proximal and distal be not lacerated the subject suffers but little from the lesion, though the perineal body be torn completely to the rectum. The levator ani fascia proximal forming the gutter or sulcus on each side of the vagina is firmly blended with the vaginal canal as the same strong fascia in the male surrounds the prostate. In parturition, in perineal laceration we should not merely seek for lesions in the dorsal commissure of the pudendum, for that is due to the escaping head and shoulders and is visible, but we should search for concealed lesions of the strong fascia, the sulcus on each side of the vagina. The most serious lesion of parturition may occur without visible external injury. This lesion is in general a separation of the pelvic fascia from the vaginal wall. If the fascia be torn from this the dorsal vaginal wall will not be drawn against the ventral and the canal will be occupied by within; it will be like a collapsed bag. The fascia, together with the muscles, maintain the vaginal and rectal canals in the contracted closed condition, excluding air. The ballooning of the vagina with but little injury to the perineal body is indicative of fascial lesions, lacerations within the pelvic cavity along the vaginal canal. The vaginal rectocele is due to the lateral retraction of the levator ani fascia proximal and but little to the external laceration. The subvesical connective tissue is stretched, thinned, elongated and the vesical support has disappeared. The beginning of discomfort on assuming exercise is due to nerve laceration, nerve trauma, to deranged pelvic circulation, to dilatation and straightening, extending of veins to non-uniform support of the blood vessels and nerves by the proper connective tissue. The advancing head crowds the fascia ventralward and if the parturition be terminated without forceps the rents, lacerations, begin chiefly in the rectovaginal septum. It is well to decide what and where the laceration is so that tissues may not be either denuded or cleaved unnecessarily, for it is not infrequent to see tissues united which were never involved in the lesion. Perhaps sufficient has been demonstrated, anatomically and clinically, to show that the lesions of the perineum which disable and discomfort the patient are chiefly lacerations of the fascia and secondarily of the muscles. On this view we base our labors. If this be the case, we can easily see that Emmet secured success by denuding an elliptical area of the vaginal mucosa on each side in the vaginal sulci. The curve of the denuded area corresponds to the dorsal curve of the rectovaginal septum, and is situated within the introitus. Now, by introducing deep dorsoventral sutures, the levator ani fascia proximal and distal may be reunited, restoring the curve of the dorsal vaginal wall and the fascial layers at the pudendal exit. In reuniting the levator ani fascia proximal and distal

the levator ani muscle becomes also reunited, but in an imperfect degree. The levator ani is closely embraced by its proximal and distal fascial planes, as from its origin, insertion and relation it depends on its closely associated fascia. The restoration of the function of the levator ani muscle must be accomplished through restoration of its intimate associated planes of fascia. If success depended on the muscle chiefly it would be necessary in rectocele to reunite the separated levator ani loops ventral to the rectocle in the median line or raphe, so the symmetrical muscular action would be restored. It is true that to secure muscular action of the levator ani the loop must be so repaired that the vifers shall start to act approximately from the raphe on both sides, but this is accomplished by reuniting the levator ani fascia as near as possible in the median line, which brings the muscular loops with it. The levator ani fascia proximal and distal is really a sheath for the levator ani muscle to accomplish its functions. The sheath can not be torn without creating damage to the muscle. In rectocele, this fascia is so torn, extended and stretched that the ventral wall of the rectum loses its muscular support and projects ventralward. Whether the sutures be introduced ventral-dorsally or transversely, it matters but little, if they include within their grasp the levator ani fascia located in the lateral sulci of the vagina, and whatever is performed, to be successful, the rectovaginal septum composed chiefly of fascia, must be restored to reproduce the normal curve of the dorsal wall of the vagina. Mr. Lawson Tait's flap operation on the perineum accomplishes exactly what Emmet's operation in the lateral vaginal sulci does, with the exception of denudation. Both operations, when properly and successfully executed, result in the restoration of the continuity of the deep and superficial fascial layers of the pelvic floor, with the establishment of partial or complete muscular function. The deep sutures reunite the structures (fascia and muscles) at or near their normal points of attachment. Anatomically then, the objects to be obtained in an operation for colpoperineorrhaphy are (1) the restoration of the levator ani fascia, proximal and distal; (2) the reunion of the fibers of the levator ani muscle so that it will functionate—both fascia and muscle must have relations at the perineal attachment; (3) the restoration of the transverse perineal muscles which draw the vagina lateralward, causing it to remain patent; (4) the restoration of the ischioperineal ligaments in regard to the perineal body; (5) the dorsal curve of the vagina must be reproduced by restoring the rectovaginal septum; (6) a new perineal body, a "fixum puncture," should be restored so that the natural dorsalward curve of the rectum and ventralward curve of the vagina should persist, *i. e.*, normal relations should be established between the perineal center or body, on the one hand, and fascia and muscle on the other. The perineal body—"punctum fixum"—of pudendum surface relations should be restored.

The pelvic floor is composed of muscles, fascia, areolar and elastic tissue. These structures are interwoven into distinct, though complicated, relations and occupy the aperture of the pelvic exit. The pelvic floor is composed of two halves, the structure of which arise from the lateral walls and join in the median line. There are two muscles, two fasciæ and two ligaments of each kind, it is paired or bilateral. If one will carefully study in dissection the levator ani and the bulbocavernous muscle he will be impressed with their functional comparison. Both are sphincter muscles. Both have connection with skin as the majority of actual sphincter muscles possess. The three points of insertion of the bulbocavernous may be considered as one muscle. They contract together and have a similar function. The common feature of the two muscles is their attachment to the terminal fibers of the rectum and vagina. The sphincter ani is closely united to the muscles of the pelvic floor by tendons and fascial attachments. The object of the muscles of the pelvic floor is to control the distal ends of the vagina and rectum, and to accommodate urination, defecation and parturition. Fascial structures are common to muscles which afford sustaining and controlling power, as those of the abdomen, dorsum and thigh.

[Written for the MEDICAL BRIEF.]

Some Neglected Features in Primary Nephritis.

BY J. W. CRISMOND, M. D.,
Anderson, Ind.

The first article that caught my eye and fancy, in opening THE MEDICAL BRIEF of July, was the significant editorial entitled, "Are You Mentally Free?" The inspiration gathered from reading the said editorial is responsible for this effusion in reference to nephritis.

It certainly means much to be mentally free, and it frequently requires heroism of the highest order to be brave enough to break away from preconceived opinions that have nothing to plead for their existence save reverence that is instinctively paid to hoary age.

Theories are, at the best, but brittle productions, and in the face of demonstrated facts fall to pieces for the want of cohesive verity.

The only tribunal in true science is the tribunal of facts, carefully arranged and sifted.

To treat a disease intelligently and satisfactorily implies a knowledge of the cause that underlies its existence. This is an apothegm that can not be successfully challenged, and should be rigidly adhered to. He who would prove himself master in the arena of renal diseases, should not only master its anatomy and physiology, but he must be learned in its clinology, and especially skilled in urology.

The fundamental cause for nephritis has not been determined, but that is no reason why nephritis, in its incipiency, should not be detected and treatment instituted, to arrest its progress, before it reaches the lesional stage—irreparable.

In its incipiency nephritis is as curable as any malady the system is heir to.

In its secondary stage we possess no specific for its ravages, hence the treatment must necessarily be symptomatic.

Pardon my tautology, and what seems to be digression, but I wish to impress this idea upon the mind, to obtain the best result from antitoxin in diphtheria it should be administered in the *earliest stage* of the disease, and not wait until the whole system is profoundly saturated with toxine.

Your attention is called to this point for the purpose of emphasizing the importance of an early diagnosis, in order to treat and conquer the disease in its incipiency, while it is curable.

We will endeavor to point out briefly some of the neglected features which are very essential to perfect our diagnosis in early nephritis. Prior to the nineteenth century nephritis was known as dropsy and treated as such; thus mistaking one of the late symptoms for renal disease.

In the early part of the nineteenth century Richard Bright, an English physician, discovered that dropsy was only a symptom of what was regarded as a pathological entity.

Nearly a century has passed into oblivion, and we are no nearer the solution of the etiological problem than in the time of Richard Bright.

This being true does not render us blameless for our mistakes and failures, should we neglect to apply the most approved methods and technique to discover the disease in its incipiency.

Roger declares that "Examination of the urine should be made in *all* cases and in *all* patients."

This may appeal to some persons as being irksome, superfluous and an unnecessary routine.

But when the importance of this procedure is better understood the inestimable value of this seeming irksome task will be more fully appreciated.

This allusion to a duty, generally neglected, is not a commonplace or trite bit of persiflage; for it should be remembered that in science, and especially in medicine, the contemned and despised theory of one generation is frequently the gospel of the next.

The declaration of Roger is not of a visionary, the conclusions of an overwrought enthusiast.

But, rather, it is the product of an eminently safe and sane teacher; one who fully recognizes the fact that nephritis develops so unconsciously, and so insidiously does its destructive metamorphosis progress, ere the patient or the physician is aware of its presence, that the disease, as a rule, is far advanced

before it is discovered and treatment instituted.

This fact accounts for the failure to cure in nine-tenths of the cases treated.

Experience has taught me the value of urinalysis (not test-tube methods) in determining the condition of the kidneys, and in detecting nephritic indications in its earliest stage.

Our knowledge of the science of medicine is poor capital, indeed, if it is not used to detect and arrest disease in its remedial stage, whereby we will be the better able to render assistance and restore the sick to health.

What the sick demands at the hand of the physician is help. The sick person cares but little for the profundity of the physician's erudition if it can not be utilized in restoring him to health in time of need.

"We are living in an age when it is proper to live and when *all* are interested in medical matters.

"It is not that medicine has in any sense of the word revived, but that she has simply changed her attitude of observation.

"What is characteristic of these modern days, so far as medicine is concerned, is the high place we assign to the study of the origin of disease."—Bouchard.

"The study of the urine in reality should never be passed over; it affords the physician indications of the highest importance."—Roger.

"A sufficient and exhaustive knowledge of the characters of the urine is a point of the utmost consequence to the physician, since the changes which it undergoes are the expression of numerous morbid processes and their intelligent interpretation affords the surest aid to diagnosis."—Von Jaksch.

Mark his language! Von Jaksch does not say a word about test-tube examination of the urine. He says a "Sufficient and exhaustive knowledge of the characters of the urine." To expect to gain this knowledge from a test-tube examination (?) would be absolutely absurd—nonsense gone to seed.

To declare that nephritis existed simply because of the presence or the absence of albumen, per test-tube *data*, is not only unreliable but often a grave error.

Remember this very important truth, namely, many cases of interstitial nephritis run their entire course without a trace of albumen in the urine, and, again, there may be albumen in the urine and no renal lesion present.

So many problems present themselves for solution in renal troubles that require keen discriminating power to solve, it behooves the conscientious clinician to familiarize himself with the pathology of the secretion and excretion of the urine, and also the normal composition of the latter, together with those fluctuations which are included within the range of health.

In view of the great variety of indications and symptoms of nephritis, any one of which taken singly might easily mislead the diagnostician, one can not be too cautious in weighing all the conditions before reaching final conclusions.

By disregarding the injunction to "weigh all the conditions before reaching final conclusion" is where the danger line lies, and at this point we are apt to come in contact with the reefs and shoals in making our diagnosis.

In the following analysis of cases I do not wish to be understood to imply that the symptoms here enumerated are only common to nephritis, by no means; but I do affirm that all nephritics present one or more of these neglected features or symptoms in incipient nephritis.

A patient comes to us complaining of some gastric ailment. We conclude, *a priori*, that it is an idiopathic gastric malady, without taking the pains to ascertain whether or not it is simply a sympathetic condition, the result of renal disease. We treat the case for dyspepsia. We have allowed the patient to make the diagnosis for us. The renal lesion progresses while the physician blunderingly, ignorantly and lazily fritters away valuable time trying to subdue an effect while the cause is left undisturbed.

Another complains of a pretty constant occipital neuralgia; it is an old complaint; has tried various remedies and different physicians, and has received only temporary relief. The kidney in disease has never been considered in rela-

tion to constant occipital neuralgia. It is so much easier done to give an anodyne; and again, it smacks of such wonderful intuitive wisdom.

Here is a victim of persistent vertigo appealing for relief from a condition that is not only a physical detriment to his well-being, but is also mortifying to his moral sense.

We can think of but one culprit who is responsible for this disturbance, and his name is gastric neurosis, accompanied by his reflexes, *etsequentia, etcetera.*

The physician is not infrequently called on to cure epistaxis, with the volunteered information that the affliction has been in existence for a certain number of days, weeks, or may be months.

That it makes its appearance without any apparent cause; upon assuming certain bodily attitude, or under the enervating influence of excessive heat, or it may be brought on by the frigid effects of very low temperature, etc. To clarify the situation we will assign the applicant for relief to the masculine gender; and that he is free of all clinical evidence of pulmonary tuberculosis. We treat the symptoms of this case, but neglect to seek the cause.

But of all ailments, of what is considered by many as only of minor importance, for which help is sought, heart troubles leads the clinical van of all other afflictions.

The cardiopaths, representing one of the primary symptoms of nephritic disease, are numerous. But so far as receiving proper clinical recognition that their condition demands at the hand of the conscientious clinician they are, in too many instances, put on a simple cardiac sedative, tonic, or stimulant, as the case may indicate.

It is so much easier to look wise and assume the air of transcendant importance than to investigate the urine for renal morbidity in order to locate the cause of the cardiac disturbance.

Thus we might continue to enumerate important primal clinical symptoms, which are ever present, but whose renal value are overlooked, or ignored because of criminal indifference.

I have been betrayed, unconsciously, into a longer disquisition than I had intended on the several features of this paper, hence I must abbreviate my further remarks and leave much unsaid that is really of value and interest along this line of thought.

Now then, with emphasis, if you please, I will say, albuminuria is only a symptom of doubtful clinical significance, and of itself is no evidence of renal lesion. The only trustworthy *data* is to be found in the physical, clinical and microscopical examination of the urine.

This will afford information of the utmost consequence, the evidence of which can not be impeached.

To review the several forms of renal lesion is beyond the scope of this paper. Permit me in closing to repeat that nothing short of complete quantitative, chemical, miscroscopical urinalysis, is sufficiently accurate to determine the *renal status.*

The present age demands facts and figures, grounded upon the correct interpretation of symptoms, which will lead to the primal cause of the disease, and not fads and fancies, that will-o'-the-wisp which misleads the careless, lazy dilettante into the error of regarding the consequences as the real pathological entity.

[Written for the MEDICAL BRIEF.]

Right Living.

BY JAMES BURKE, M. D.,
Manitowoc, Wis.

Man is governed by his habits. His physical and spiritual well-being depends on their despotic sway. Unphysiologic living creates an artificial grade of cellular function, and, if long continued, creates a changed cellular construction. Right living presupposes harmony of action, physical, mental and moral. Such symmetrical development achieves the best there is in a man; an impediment to the free action of the developed man, in any of these essential attributes, hampers the usefulness of the individual to his fellow-man; the measure of worth of a person consists of his services rendered in uplifting his fellow-man. Singleness in the pursuit of material wealth is the bane of civilization. The educated and favored

few owe all they possess to the mass of their fellow-beings. Happiness itself is fundamentally dependent on our services toward promoting the greatest good to the largest number. To bring the matter home to our own profession, we are dutifully bound to give a full measure of our scientific knowledge to setting the people right on the liquor question, the economy of their utilizing the abundant medical services always near at hand in perpetuating the good health of the various communities, with its consequent monetary advantage; the venereal subject is a paramount issue with the great minds of the medical profession, and bids fair to bring forth ripe, rich fruits.

The correction of popular errors regarding the use of alcoholics for beverages and medicine is urgent. Alcohol in medicine is a fallacy; its physical composition precludes its use to build up normal tissue; it is a protoplasmic poison; its avidity for water radically changes the quality and quantity of the digestive ferments. This inherent property of alcohol upsets the delicate combination of nitrogen, phosphorus, and glycerine, in the construction of the brain, and constitutes the drunken state. Its destruction of the digestive ferments of the stomach, from its being retained there until its final absorption into the general circulation, is well known. The liver suffers severely from the extra load of abnormal protein thrown upon it for vicarious action, in the effort to convert the heterologous protein into pabulum homologous with the tissues of the host; this vicarious action, though failing for the greater part, serves to derange the liver, first in its proper nervous supply, with consequent physical changes in its cellular function and ferments, and, finally, establishing hypertrophic changes of its connective tissue framework.

If the life of the tippler is prolonged a contraction of the capsule sets in, and squeezes the life out of the abnormally secreting cells of the liver.

Other tissues also suffer deterioration from the absorption of hybrid and heterologous protein from the walls of the intestines into the general circulation, where the blood and other tissues are burdened with the presence of foreign protein, which they stow away in the tissues until some physical or medical force resolves them back into the blood and fluids, where, if they meet a cognate proteid entity, an ultimate primary unit of which unites with it to form a complete chemical entity, a harmless excretory product is formed; but if a temporary chemical union is formed with a pseudo or other incomplete affinity, a leucomain is formed, the toxicity of which depends on environmental conditions. The leucomains and vegetable alkaloids, and some other active principles are allied, the ultimate component units of which are chemicobiologically interchangeable, in forming new compounds, and in rounding out incomplete entities for excretion. The neutralization of the leucomains in the walls of the intestines should precede that of the systemic leucomains, by the indicated use of emetine, sanguinarine, podophyllin, chionanthin, juglandin, or hydrastin.

Intestinal asepsis should be practiced to prevent further fermentation of the bowel contents, thus limiting gaseous distention, and allow the bowels to assume their normal caliber, assuring a better circulation in the secreting glands of the intestines, thereby furnishing a better quality and quantity of digestive ferments.

[Written for the MEDICAL BRIEF.]

The Most Reasonable Faith.

BY R. C. CAVE,
St. Louis, Mo.

As stated in a previous article, faith in the doctrine of divine immanence seems to me far more helpful than the faith of either materialism or orthodox theology. It also seems more reasonable. It conceives of God, not as an all-powerful being throned above the world, and shaping events by pressure from without, as a potter shapes clay; but as a wise and loving spirit resident in nature, always expressing himself through natural forces, and unfailingly making for good. It views the life of the world as a gradual evolution of this divine spirit—a gradual progress toward the perfect. It

is true that this faith seems to be opposed by some facts of existence, but that is also true of every other theory of things taught by men.

The doctrine of materialism seems altogether incompatible with the facts of mental experience. The materialist may tell us that what we call soul is merely "the series of mental phenomena which make up an individual mind;" but the fact remains that there is something which takes cognizance of this "series of mental phenomena," and must, therefore, be different from the "series" itself. This something is conscious of perceiving, remembering, observing, comparing, feeling, desiring, willing, etc., and it is conscious of these acts as different from, performed by, and belonging to itself. The existence of this something—this Ego—which possesses organs and thoughts, but is distinct from both organs and thoughts, is so inseparable from the facts of mental experience, that even the materialist is compelled to recognize it, indirectly, when he attempts to explain the operations of the mind. It has been truthfully said, that "however much assailed or disowned, the conception of a mind or conscious subject is to be found, implicitly or explicitly, in all psychological writers whatever—not more in Berkeley, who accepts it as a fact, than in Hume, who accepts it as a fiction."

No less true is it that many facts of existence seem to be incompatible with the faith of the orthodox theology, which is based on belief in the existence of a personal God, who is omnipotent and benevolent, and who created and governs all things "according to his sovereign will and pleasure." Is it possible to reconcile the terrible facts of sin and suffering with the existence of such a God? Would an omnipotent and infinitely loving Creator have permitted sin to enter the perfect world he had made, and entail misery and woe on all the generations of mankind? As well ask if a loving father, having the power to prevent it, would permit his children to fall into wrong and pain and wretchedness. Theologians tell us that God "was pleased, according to his wise and holy counsel, to permit" sin, "having purposed to order it to his own glory;" but, surely, it was not very benevolent to permit his creatures to go wrong and bring suffering upon themselves in order to add to his own glory. We are told, also, that God permits suffering because he purposes thereby to perfect and save men; but a truly benevolent being would not save men through suffering, if, clothed with omnipotence, he could save them just as well, or better, without the suffering. Look at the matter as we may, the facts of sin and suffering seem to be incompatible with faith in a Creator and Supreme Ruler, who is both omnipotent and benevolent.

It must be admitted that the facts of sin and suffering seem to lie against the doctrine of divine immanence also, but they do not lie against it with the same force. The doctrine of a divine spirit resident in nature, and unfailingly making for good, involves no such glaring inconsistency as we find, for instance, in the belief that a loving father permitted his son to be crucified to save those who would believe on him, when, being omnipotent, he had the power to save the whole human race without that crucifixion; for the spirit in nature is not omnipotent, in the orthodox sense. This spirit can not bring worlds into being by "the breath of his mouth," and accomplish any desired good by merely commanding it, but must work out the good along natural lines, and through natural forces. There are cases, it is true, which, considered separately, seem to show a failure of this spirit to work out good at all; but, when we consider these cases as links in the chain of evolution, we find that even they are agents for good, impelling forces in the world's onward march, making for the steady gain of man. Sin and suffering are among the means which the divine spirit uses, and without which the world could not be brought to higher and better things. It is in the hard school of experience, through mistakes and sins and sufferings, that mankind has learned wisdom, and been led slowly forward in the march of progress.

3328 West Belle Place.

[Written for the MEDICAL BRIEF.]

Some Observations Upon the Relation of Sugar to the Genesis of Cancer.

BY T. H. EVANS, M. D.,
Philadelphia, Pa.

Some merriment greeted the announcement by an English physician, recently, quoted as saying that a diet of too much carbohydrate value might predispose to tuberculosis.

After the merriment subsided, students of medicine continued to inquire into the possibilities.

The studies of Solis-Cohen, of Philadelphia, had for years suggested the relation of tuberculosis and carcinoma, and now some developments point to the two and a third disease, namely, diabetes, as forming a group in etiology, and that one due to the faulty reception of sugars in the system.

The studies of men under the Collis P. Huntingdon foundation in New York have shown that some of the products of sugar are found, and in more or less relative proportion, in and around the degenerated tissue of cancerous nodes. This is not a chance relation, in all probability. Some slight clinical investigation has indicated to me the very important effect upon cancer of the liver that a reduction of sugar in the diet may have, and in connection with the employment of the Beard treatment, that by hypodermic administration of the pancreatic ferments, trypsin and amylopsin.

Of this latter I would like to speak, if briefly.

Before making a clinical observation have the urine examined for albumen and for sugar. Diabetic symptoms occur in late cancer, and at times early.

There is usually some icterus, and many of the symptoms found and the physical signs are similar to those of indigestion, as in children who have indulged in sweets to excess.

There is much gastric insufficiency, and this symptom, as well as the signs of hepatic insufficiency, are favorably affected by the employment of the absolute diabetic diet.

The eye clears and the tongue improves. There is less melancholy and more appetite.

Even so much as this would justify some such regime. But another result seems probable. (Judging by my limited experience.)

Doses of the pancreatic ferments, which ordinarily must be given with caution, are less violent in reaction under the diabetic diet, and I have found in check experiments that very large amounts of the ferments so administered afford little disturbing symptoms, such as have been reported by observers, both in America and abroad.

The purpose of this paper is largely empiric, if I may so term the request for greater clinical tests of these observations. I have found that the toleration of hypodermic doses of trypsin and amylopsin is marked. I ask any who employ these therapeutic agents to try the effect under the absolute diabetic diet.

As a caution, it may be added that this diet may have to be broken. The appearance of diacetic acid or oxybutyric acid in the urine is taken for a signal of entrenchment upon the reserves of the general nutrition, and that the fats are being broken into with some probability of disaster to the body's economy.

Why the liver is the site of so many cases of secondary and, frequently, of primary cancer, is very likely to be understood in the light of the function of the liver.

In many cases of anemia in the hepatic tissue there are observable rings of hemic pigment, and that this iron of the blood is thrown down so conspicuously in the liver substance may be taken to show that there is some obstacle to the red cells of the blood, and that they are either dissolved or impeded in function. But with the oligocythemia present, it may be suggested that the red cells are destroyed, and, possibly, as by fire. The use of carbon in the physical being is chiefly for conflagration. The muscles employ the sugar and the ferment in the blood-lymph stream (derived from the pancreas) to furnish heat and motion.

The liver is the great glycogenic center.

These points are evident, and plainly direct our eyes to the carbohydrate metabolism.

It is with a feeling of blindness that is very annoying, that we look and fail to see further.

The spleen may be removed without danger to life, in most instances. But the heart and the liver seem to center great primary functions. There are few other organs which are so vital to us. In time we shall come to understand the particular place in the chain which they strengthen or, indeed, compose. It is to the physiologist that we look, and with eager eyes.

2359 North Front Street.

[Written for the MEDICAL BRIEF.]

A Disease Without a Name.

BY J. WATERLOO DINSDALE, M. D.,
Prescott, Ariz.

The regret often comes to one who is aged that they can not live over again, and have the same knowledge to start with that they have accumulated on the voyage of life. It must be a bitter regret. The only advantage to be derived in living over again, in our estimation, is to go over the ground and do more good than we did on the first journey. The following attempt at doing good while we are still in the flesh:

There are thousands of men in the world, especially the United States and Canada, who are not sick, but they are not well. They are listless. They are weak. They do not have kidney disease, but the back is weak. They may have some local trouble with the lungs, liver, kidneys, or the digestive apparatus, but they doctor their local trouble and it appears better, and they are still weak. Their minds are not sharp. They miss bargains. They are irritable. They can not see correctly into their circumstances. They exaggerate trifles and diminish the mountains. They are stubborn in mind, but yet are easily persuaded into or tempted into excess. They are unfit judges of their own standing, and the worldly verdict is that they are "off their base."

There are women who are in the same category. They dress well and are fairly well behaved. They are not ailing, especially, but they are invalids.

They patronize a physician, and yet they hesitate to take medicine. They know medicine does not permanently help them. They go to different doctors' offices and hear a different story at each office.

One physician assures them that "womb disease" is killing them. Another points to the liver and says, oracularly, "It's out of order." Another specialist declares that rectal medication is needed, and if piles, pockets, papillæ and what not, were out of the rectum, all would run serene in the bodily economy.

But all are only stepping stones or mile posts on the march to decay.

If in moderate circumstances, the patient lingers along a few years and drops into the grave. If wealthy, specialists are consulted, and the end is hastened by a recourse to those commonly prescribed "nerve stimulants" (but which are nerve destroyers), strychnia, bromide of potash, belladonna, opium. We say the end is hastened, because in the disease without a name the more drugs the quicker comes destruction.

We have known an entire family swept into the grave from this disease, while doctors declared and certified that the dead were victims of consumption.

So, too, in the case of the woman. She is physically and mentally depressed. She has no special organic disease as, for instance, cancer, but while cancer has, at the present, ceased to inspire the horror it formerly did, all women who have the disease without a name readily succumb to any intercurrent disease.

We attended, some years ago, a lady dying from this disease, and the husband rallied after the death of the wife, and in a year married again.

Both himself and second wife are now suffering from this malady.

We know of a clergyman satisfactorily settled, with a good living. He had the disease. He changed climates, grew worse, changed again and died. The wife is partially recovered.

Can these people so diseased be distingished? We think they can. Sadness or mild sorrow is a distinguishing symptom.

Of the one hundred thousand doctors in the United States fully two-thirds attempt to combat this "disease without a name" by drugs, chemicals or nostrums

of no earthly value. It is not too much to say that fully one-half of all named diseases are caused by this disease without a name.

We do not believe there is a hamlet inside the boundaries of the nation where there is not a victim to this disease without a name.

What causes this disease?

To this question we reply that there is only one cause. Unlike fevers, which may come upon a person from a multiplicity of causes. (At this point we desire the reader to understand that we do not class fevers of any kind as diseases by themselves; a fever is a symptom of a disease, but the fever itself is not a disease. And mark this, the time is coming when this doctrine will be taught in the fashionable schools of medicine.) This disease has only one cause, and this cause is perversion of the sexual functions.

We do not now allude to this sin and folly of youth, masturbation or self-abuse, a practice which is left in the dark to the unfortunate youth, and is only too frequently learned of from the outside world to one's detriment, instead of from the mother or father, as it should be, and learned of to be shunned.

We assert that this disease without a name is a perversion. Let us clear it up a little.

When it comes to pass that a man is married to a woman, and the sexual passions are gratified, while the man refuses to become a father, or the woman refuses to bear children, they resort to a number of devices to prevent conception—to prevent the egg of the woman from becoming fertilized by the seed of the man.

The most common of these preventions is a perversion. Before the marital act is completed they separate. It is a crime for committing which God slew Onan. This secret, unspoken-of crime, this loss of seed in the male and the corresponding loss of force in the woman is the cause of this common disease without a name.

In the male this disease is the more formidable, because it is a tabooed subject by the doctor and patient. The ordinary physician can not probe the acts of the home life. He says—and says truly—"If I mention those subjects, no matter how much they may now respect me, they would soon join in hating me for my meddlesome interference." So the doctor is ordinarily powerless for good, and his silence, under the circumstance, is a necessity. The crime goes on unrebuked, and in too many instances the victims are ignorant of the results that follow. Sexual gratification takes place, but the "seed is spilled." But not all spilled. A part of this seminal fluid can not be ejaculated or voided, and this suddenly chilled, inert, dead and retained semen (for it can not all get out through the ejaculatory ducts, and the seminal vessels are not fully emptied) decays and is reabsorbed into the system. It destroys the spinal cord. It softens the brain. It changes the countenance from a clear, arterial red, to a putty color. It stoops the shoulder. It dazes the intellect. From a healthy product it becomes a virulent poison. The man is no longer an individuality. He is a walking death. A bunch of festering corruption, which is hastening to the graveyard. This is a cause of enlarged prostate glands. A cause of paralysis. A cause of palsy. But, above all this, perversion of the sexual instinct is a cause, and the sole cause, of the disease without a name.

But the woman does not escape. If one thinks the unfortunate woman ever escapes from any punishment, read history. The woman never escapes. Her punishment meets her on the way.

In the case before us, the woman, having become passionate, is suddenly shocked by an abrupt ending. The uterus, especially its mouth and neck, lacking the necessary and needed natural moisture that is provided for it in the semen of the man, is heated and congested. Here commences those dreadful troubles of the uterus which so often assumes the cancerous form. She suffers as long as possible in silence. Under the doctor's hands she is cauterized. Fatal mistake—she is tamponed, flexed, straightened, glycerined, pessaried, supported, treated, excised, and, finally, the uterus is extirpated or taken out. She lingers a year or two, and is placed in the grave.

Wretched, wretched humanity!

Where do these evil teachings and practices commence? In many ways.

Oftentimes the mother advises the married daughter to not bear children.

We believe they are good Christians, but in the case before us we should rather take our chances with the Atheists for future and present rewards than to believe and act as this couple have acted. It was Lord Bacon who said:

"Atheism leaves to man reason, philosophy, natural piety, laws, reputation, and everything that can serve to conduct him to virtue. But superstition destroys all these and erects itself into a tyranny over the understandings and consciences of men."

This habit of sexual perversion is worse, even, than superstition, since it directly destroys body and brain.

What can be done in this disease without a name? Stop the producing cause.

If the woman and man have resolved not to have children—*keep apart.*

For the man who has a wife that refuses to bear children is, to all intents, divorced. The farther he can keep from such a woman the better for his body, and the safer for his soul. No man whose seed is part spilled and part retained, can long retain his intellectual faculties.

To the woman we would say, if your husband does not care or desire to father your child, in the name of God leave him. Do not let him destroy you, as he certainly will if you permit his half embraces. To botn we would say, if you can not complete the act with the utmost freedom and love, and if there is any hindrance, obstruction, repugnance, or, in short, if there is anything except the warmest trust, love and affection—*separate.*

Go out upon the street and look at the passers-by. Look at the white faces, hollow cheeks, void expressions, and gnawing, undefined care that is sapping the life from the body. Listen to your preachers, and hear their flimsy platitudes, and their trashy oratory, and ask yourself how many are continent? How many are pure? Call up the faces of your dead friends, and see how many were victims to a disease without a name. Ask yourself how you stand before your own conscience and before God.

Do not stop with examination. Resolve to do right.

[Written for the MEDICAL BRIEF.]

The Moral Survival-Value of Oscar Wilde.

BY AXEL EMIL GIBSON, M. D.,
Los Angeles, Cal.

The present revival of the letters and philosophy of Oscar Wilde has its significance rather as an indication of the present state of public morals than in any intrinsic value of his writings. The storm of emotions raging both for and against "Salome," shows by its very intensity, and by the subsequent *editions de Luxe* of his books flooding the book market, that the author has found at least a passing response in the public mind for his principles of art and morals.

This response has its strongest support in what might be called the posthumous "confessions" of Oscar Wilde contained in his famous book *De Profundis*—as in it is found the supreme effort of his life to vindicate the principles and modes of conduct which gradually effected his moral and social breakdown.

Without doubt *De Profundis* stands for the best and strongest ever expressed by its author. Written between prison walls, where the conjoined influence of isolation and social condemnation stirred into life and conscience whatever feelings of sincerity and faith of which his nature was capable—the document stands as a final and consummate personal appeal to human sympathy. It brings out the focalized aspirations and hopes of a mind agonized by the ambition to remove the stain of civic dishonor fastened on his life by his social judges.

Yet, with all its pathos of sentiment, the book fails to impart any real moral lesson to its reader. It lacks sincerity and moral force. The author gives the impression of aiming at a restoration of reputation rather than of character; with the forgiveness of man as by far the stronger motive than the forgiveness of God. All throughout the entire cycle of his "confessions" one feels the presence of half-veiled or half-felt motives; the desire to be cleared, not so much from the accusations of a morally outraged conscience as from the official stigma thrown upon his life by the misfortune of being

convicted of what his public accusers chose to call criminal conduct.

What gives to Oscar Wilde his main interest, however, is not his more or less successful pleadings for public sympathy, but the symbolic relation in which he finds himself to the art and general culture of our age. His position in modern life is by no means unique or exotic; it is the mere striking projection of a general tendency of the time to substitute life with the science of life, ideal with artifice, morality with intellectuality—a tendency which sets its stamp of egotism and personal advantage on so many of our private and public undertakings.

And while the degenerate life of types like Oscar Wilde add force and momentum to the intellectual-ward and sensual-ward tendency of modern culture, it is, on the other hand, the very acceptation and application of these principles that makes degeneracy like Oscar Wilde's possible. The individual with his vices and virtues stands in the same relation to the commonwealth as a physiological function stands to the bodily organism; the specific expression of a constitutional state. A perfect organism can show no diseased features.

It is in the isolated ascendancy of the intellect, however, that the life of the public morals are threatened. For intellectualism, if not softened and qualified by affections and feelings, tends towards mental overgrowth, self-sufficiency, egotism and indifference to the conditions, the aims, needs and failures of our fellow men. Most of the motives actuating the purely intellectual life, even if promoting social benefits, spring from a desire to obtain public recognition and rewards, rather than from motives contained in the act itself.

And even where deeper minds are engaged in wrestling with the world-problem, and the small motives of personal vanity are merged in the larger interests of scientific seriousness, if intellect alone leads, the driving impulse is more often found in a feelingless curiosity for the mere incidents of research, than in a warm, living sympathy for the increase of human welfare that may accrue from the researches. And it is, furthermore, in this lack of humanizing motives, with the accompanying failure to feel the heart-throb of the larger, fuller, deeper life, that induces the scientist to concentrate his mind on the appearance, rather than on the soul of things; in the rigid analysis of symbols, rather than the synthetic adjustment of principles. We trust in our heads more than in our hearts, in our touch more than in our feelings, in our reason more than in our intuitions. Hence, the so frequent occurrence, that in the life and labor of a man we pay less attention to the purity of his feelings than to the incisive force of his intellect. And yet without the leadership of purified feeling the intellect, however sagacious, must ever fail to rise above the vicious circle of mere scientific guesswork with its theorizing and copying. In the pure feeling we have the sesame that opens the sanctuary, both to art and to nature, enabling the thoughtful and intuitive to decipher the signatures and count the heart-beats of the noumenal, ideal world-life expressed in terms of concrete organized existence.

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In Oscar Wilde we find a type of this intellect-governed mind. Responsive to the analytic and isolating tendency of the age, he loses sight of the larger, unifying, synthetic view of life, and sketches his world-picture through the refractory, foreshadowing medium of a sense-fed and sense-limited intellect, demanding the subordinacy of feeling to intellect, of moral to form, of the ideal to the sensational, the unity of principle to the diversity of symbol.

Perhaps, in "Dorian Gray" the author has preached this gospel of sense, with its triumph of mind over morals, with more audacious frivolity than in any other of his writings. Without hesitancy he announces "that the value of an idea has nothing to do with the sincerity of the man who expresses it," and that "the moral consciousness of an individual has its genesis in the liberation of the associated sense-impulse." Yet, notwithstanding the soul-dissolving maxims of "Dorian Gray" as an expression of character and individuality, this book has more literary value than "*De Profundis.*" For even if in "Dorian Gray" we find the moral life at its lowest ebb, the presence

of sincerity sets free a redeeming quality in its degenerate form. Thus, while in "Dorian Gray," with all its degenerate philosophy, the author has the moral courage to appear without mask or pretense, in "*De Profundis*" he is lost in a chaos of conflicting emotions, untrue feelings and melodramatic pathos. And though his appeals to the sympathy of the world are delivered with classic eloquence, artistic form, poetic diction and intensity of self-interest, they lack convincing force through the absence of sincerity of feeling. An emotion, to take effect in the heart, must have its genesis in the heart.

Without sincerity there can be no real remorse or repentance. "*De Profundis*" exhibits a sense of violated rights rather than a confession of sin. "Terrible as was what the world did to me, what I did to myself was far more terrible still." For from his point of view, his moral responsibility involves but himself and his own personal welfare. The scores of moral wrecks in man and womanhood, due to the soul-poisoning influence of his life and writings, seem to be of no significance to him. His mind is absorbed to its last power with the injury the world inflicted on him, but oblivious to the terrible things he inflicted on the world. He is a victim of merciless circumstances—the martyr who is not even permitted the redeeming triumph of wearing the crown of martyrdom.

In going over this strange commingling of pathos and cynicism, of high-soaring emotions and groveling platitudes, insane self-idolatry and morbid humility which forms the substance of the "*De Profundis*," one feels inclined to doubt whether his suffering has fundamentally and intrinsically advanced him a single step on the path of life's true philosophy. "Morality does not help me," he exclaims. "I am a born antinomian. I am one of those who are made for exceptions, not for laws. But while I see there is nothing wrong in what one does, I see there is something wrong in what one becomes." In statements of this nature Oscar Wilde, with cynic plainness, lays bare the elements and forces at work in his moral construction. A philosophy of life which ignores the very instrumentalities and possibilities of life, lulling its devotee into the forlorn hope that futurity stands for self-generated energies, disconnected and independent in their relation to present efforts; that *becoming* is possible along any other line than that of *being;* or, in other words, that a fruit can exhibit characteristics and qualities different from the tree on which it is grown, and attaining its perfect state of maturity without passing through the evolutionary stages of bud and blossom, furnishes a very hazardous principle when applied to moral conduct. An individual who regards himself as an existence made up by disconnected, independent stages of growth, naturally will succumb to a sense of irresponsibility as to the condition and attitude of his present phase of evolution. On the other hand, to the morally self-conscious and sane individual every moral or mental attitude must go to form an element or energy—imperishable and inescapable—by and through which the rise or fall of a character has its only logical course and basis.

It is in his thirst for exalted personal uniqueness and moral irresponsibility that Oscar Wilde encounters the most serious obstructions for his moral development. Finding his genius too complex and too highly specialized for the action of ordinary moral nature, he considers himself justified in dispensing on a similar basis with the services of religion. "Religion does not help me. The faith that others give to what is unseen I give to what one can touch and look at. My gods dwell in temples made by hands." * * * "When I think about religion at all, I feel as if I would like to found an order for those who can not believe; the confraternity of the faithless, one might call it, where, on an altar on which no taper burned, a priest, in whose heart peace had no dwelling, might celebrate with unblessed bread and a chalice empty of wine."

It is difficult to know whether the author is to be taken seriously or not in these challenges, as to the value of moral and religious principles. There is one stable feature, however, in the makeshifts of his character: the sense of vanity in giving expression to something

original and striking, even at the expense of moral and philosophic sanity. It is the actor masking his clown-visage under cover of tragic mimicry. It is stilted, pompous pose of the consciously inane and wanting; the veneer of imitation spread over a surface of mean and decaying texture. His style and diction forms a commingling of close imitation at once of Byronic "world-pain" and Maeterlinckean mysticism. In the composite features of this mental mold he pours the substance of his own incongruous, aimless and trackless imagination, oscillating between artistic passion for the sensuously beautiful and the moral cynicism of a mind impervious to religious and spiritual infusions.

Failing to receive any guidance from the moral or religious element in life, he naturally also fails to find it in the element of justice. For wherever morality and religion are meaningless, no justice can be appreciated. Hence, his bitter complaint against the injustice dealt him by the world. "Reason," he laments, "tells me that the laws under which I am convicted are wrong and unjust laws, and the system under which I have suffered a wrong and unjust system." If the culprit, however, in his relation to law and justice, can see in himself only a victim and a martyr, his repentance, if he shows any, can hardly represent sincerity of feeling. Moreover, in "*De Profundis*," he declares that "to regret one's own experiences is to arrest one's own development."

Yet, in the chaos of ideas and sentiments, jumbled together in this book of puzzles and mental mosaic, it is hardly possible to determine what sentiments must be taken as a sincere or assumed state of mind of the author. In one breath he speaks of his efforts to "transform the harsh routine of necessity—the degradation of the body into spiritual experience"—while in the next he laments the unreasonableness of destiny, and accuses the "gods of being strange, and punish us for what is good and humane in us as much as for what is evil and perverse." The Goddess of Justice, with her eyes blindfolded, strikes at random, without aim or reason, inflicting punishment on the just, with the same strong indifference as she diffuses prosperity over the wicked.

From Oscar Wilde's point of view the only vital principle of any evolutionary value is contained in art—art, however, divorced from morals. Hence, the groundtone in his mental and moral colorscheme is his realization of being "the symbol of the art of the time," the "typical child of his age," the "central figure in the romantic movement as portrayed on the stage of modern art," with its closing scene in the soul-heaving epilogue of *Reading Goal*—which, to the ill-fated author, stands for the inevitable destiny meted out to all greatness by superstition and ingratitude.

He demands, once for all, to be appreciated and judged, not from a standpoint of morals, but from a standpoint of art. He wants to be seen in the afterglow of romantic twilight, moving gracefully over winding pathways through beauty's bower, wielding the staff of enchantment over the shadow forms of his esthetic creations. It is his love for this aspect of art that inspired him to "throw the pearl of his soul into a cup of wine," and to glide "down the primrose path to the sound of flutes—feasting on the honeycomb of pleasure"—to use his own expressions. And it is in the sphere of art he finds his ideal of Christ. Yet not art in its ethical and moral exaltation, inspiring the devotee to lift his mind in soul-soaring flights towards purer, holier zones of consciousness, but art in its one single and least vital movement—the romantic. And his conception of Christ is certainly very romantic. "Wherever there is a romantic movement in art, there somehow and under some form is Christ. He is in *Romeo* and *Juliet*, in the *Winter's Tale*, in the *Ancient Mariner* and in *La Belle Dame Sans Merci*." And as the romance of life and fiction has its genesis and force in imagination, the author is quite true to his ethical generalizations in affirming that "it is the imaginative quality of Christ's own nature that makes him this palpitating center of romance," and that "out of his own imagination entirely did Jesus of Nazareth create himself" * * * adding, by way of explanation,

that it is "this quality of Christ that makes him so fascinating to artists." As to the historical, the moral, the religious position of Jesus as the spiritual and saving guide through the vicissitudes of human evolution—Jesus, as the incarnation in time and substance of brotherhood, compassion, self-sacrificing love—Oscar Wilde has made no discoveries. Yet he proclaims himself an ardent student of the gospels—"the four prose poems about Christ," and finds them "delightful" reading. His commentaries on the sayings and doings of Jesus are all of the light, frivolous stamp characteristic to sensational journalism. "Christ, like all fascinating personalities, had the power of not merely saying beautiful things himself, but of making other people say beautiful things to him." He fondles with the divine lessons of the great teacher without a touch of reverence or sanctity of feeling. On the contrary, there is an unmistakable presence of cynicism and condescending insolence in his attitude to Christ—the half patronizing, half discountenancing air of high authority, dealing with a gifted but as yet unrecognized aspirant to academical honors.

The author of "*De Profundis*" promises his readers the early publication of a work dealing exclusively with "Christ as the precursor of the romantic movement in life," in which he will show that love has a purely romantic basis, with its sustaining force in personal and social relations. As to the larger, ideal love of brotherhood and humanity uncolored by personalities and sense-life, Oscar Wilde finds it a functionless play of overwrought imagination, without adequate response in human nature. With the one-sidedness of the egotist, he admits of no other motives, instincts or qualities in the world-life than those experienced by himself.

Recognizing himself, *sub rosa*, as unworthy of a great love, he makes the unqualified assertion that "nobody is worthy to be loved," and "that if any love is shown us, we should recognize that we are quite unworthy of it." The only rationale in statements of this character lies in the author's lack of faith in his own deeper nature. Hence, his failure to do justice to his own unvoiced heart. His moral nature is constantly trembling in the balance of power between the intellect and the feeling, the head and the heart. Any overdue estimate bestowed on the sense and intellect categories, detracts from the heart and its deeper emotions. His intellectual inflation reacts in spiritual and moral starvation, and the self-absorption of this gifted but ill-poised writer in his temporal make-up, social stature, sensuous gratification and spectacular impressiveness turns his moral nature into a vacuated hollow mockery, incapable of response to motives of the broader and deeper life of altruism, solidarity and unselfish love.

Recognizing his lack of original intuitions, he took recourse to imitating the mental effusions of writers in which he found these powers present. Hence, the semblance of Maeterlinckean diction in "*De Profundis*." But it is in this appropriation of a phrase, fashioned to serve the subtle logic and mystic depth of Maeterlinck's thought that the egotism and intellectual surface philosophy of Oscar Wilde's literary output receives its inevitable mark of insincerity and cynicism. "Nobody is worthy to be loved," he reiterates in meaningless sensationalism; "if any love is shown us we should recognize that we are quite unworthy of it." "The fact that God loves man shows us that in the divine order of things it is written that eternal love is to be given to what is eternally unworthy."

Having thus reduced the universal love of Christ to a meaningless and uncalled-for quality, Oscar Wilde, by sheer force of logic, is compelled to reduce every super-sensuous attribute of the soul to baseless and substanceless fancies. For it is in love, as a universal, all-embracing force, that every moral sentiment has its root and genesis. Consequently, the author declares boldly that the "morality of Christ was all sympathy," and "his justice a mere poetical justice—exactly," he adds, "what all justice should be." This, of course, gives room for no moral law or order. The relation of man to his universe has no other basis than that of caprice and will-o'-the-wisp. "The beggar goes to heaven because he has been unhappy—and I can not conceive of any better reason for his being sent there."

* * * "Christ knew of no laws * * * while that which is the very keynote of romantic art was to him the proper basis of natural life." * * * "For all lovely influences of life are to him mere modes of light," which, of course, leaves no moral or spiritual basis for the feeling. Or, in other words, that "when dealing with a sinner we find Christ most romantic in the sense of most real."

Thus, by a strange coincidence, Oscar Wilde, in the attitude of Christ to the sinner, discovers the same motives which fall within the color scheme of his own moral adaptations. Through a slight-of-hand maneuver, all its own, the human mind seems capable of reading into its subject any meaning or quality for which it feels a sympathetic leaning. In his "delightful" study of the "four prose poems about Christ," Oscar Wilde gains the sense that "Jesus found sin in itself a beautiful and holy thing, and that his primary desire was not to relieve suffering nor proselytize in saving sinners." "To turn an interesting thief into a tedious, honest man, was not the aim of the Nazarene." That the practical application of such Bible criticism should finally lead to moral and social break-down, was inevitable. Mental balance without moral support is untenable.

The motive back of "*De Profundis*" can hardly be misunderstood. As a moral appeal—a *memento mori*—to a world traveling along the same primrose path of pleasure as did the author himself, and to which he afterwards returned, it utterly failed. The book is focused in personal self-defense—in the ruthless effort of self-justification and restitution from unmerited misfortunes. Reforms in public or private morals, purification through suffering for wrong doings, elevation of the sinner through a life of devotion to duty, the introduction into society of higher standards of life, are not factors in the brief the author serves his moral jurors. "I need not tell you," he exclaims, "that to me reformations in morals are as meaningless and vulgar as reformations in theology." Like the general tendency of our time, which is to live in reflected morals, Oscar Wilde is gauged in his conduct by the fortunes of environments, the rectitude of style, the ethics of the suitable. To gain the sanction of his highly specialized esthetic nature the moral lessons of life must come to him attired in festive robes, accompanied by flutes and symbols. "I could bear a real tragedy if it came to me with purple pall and a mask of noble sorrow." But sorrow, to be a morally cleansing power, must be suffered in silence and humility, not flurried into the flash-light of high-wrought, ostentatious sensationalism, where the energies of the heart are vulgarized by the mind, and the still small voice of conscience muffled up in the clamorous, soul-deadening noises of an over-stimulated, sense-fed ambition with its trail of wounded, revengeful vanities.

These fundamentals of his ethical make-up rise continually into view in this book of his life, "*De Profundis*," imparting to it the leading motives. "People thought it dreadful of me," he laments, "to have entertained at dinner the evil things of life, and to have found pleasure in their company. But then, from the point of view through which I, as an artist in life, approach them, they were delightfully suggestive and stimulating. The danger was half the excitement. * * * My business as an artist was with Ariel. I set myself to wrestle with Caliban." * * *

Absorbed and lost in an altogether exaggerated opinion of his value as judge and law-giver in the world of art and letters, Oscar Wilde turned oblivious to any other mission or object in life than to float as a lotus-eater on the stream of time. After all, however, the only reason and excuse for existence of any man, gifted with genius or not, lies in his power of usefulness in human service. Service of man, unselfishness of motive, and indifference to human plaudits, constitutes the very salt of the earth that keeps the soul from putrefying. For only that which is universal to its aim and character can share the destiny of universal life, and survive. The isolated self-serving motive isolates the individual, and cuts him off from the very circulation in and through which the larger, systematic, imperishable life of the soul is alone made possible.

Selfishness introduces a force in human nature which aims at a dissolution of the nature in which it is found active. Genius, or any degree of mental power, does not save the individual. On the contrary, if not accompanied by noble motives and loving service of man, but spent in personal, self-furthering ambitions, oblivious to the fate of the world, genius, by its very energy and power of momentum, hastens the egotist through the intensity of his self-isolation into inevitable dissolution.

Responsibility, if recognized in principles, but ignored in life, becomes, through a reversion of its dynamic levers, a rentless force of self-destruction. It is one of the greatest of fallacies to regard genius and mental power as redeeming features in the life of a debauchee. His vices, so far from being less deserving of contempt through this association with genius, are rendered only immeasurably more so. No genius, even the greatest, if not accompanied by unselfishness and good will, can atone for one single moral offense. Genius is a faculty, an instrumental possession, but goodness is a power—the *moral will* brought into living action. Genius is a sword—used by selfishness; it threatens other's rights; used by good will, protects them. Hence, the sharper the sword, the keener the genius, the more telling will be its work in one or other direction. The humble citizen, unsolicitous of appreciation or favors, while living up to his conscience and highest sense of duty, does more for the ultimate advance of the human race, and generates a higher individual survival-value, than the sweep of a world-dazzling genius, if the latter be unaccompanied and ungauged by humanizing and unselfish motives.

618 and 645 Chamber of Commerce.

[Written for the MEDICAL BRIEF.]

Medical District Work.

BY OSWALD W. KATZ, M. D.,
Babylon, L. I., New York.

It was on Christmas eve, a district hurry call came in through the telephone, and, dead tired as I was, I took my bag and went out in the misty winter's evening. On a little cot in a Staniford street tenement I found a small girl—the dark eyes wide open—surrounded by the shadows of approaching death, the little white hands clutching an old rag doll. She did not cry, that poor little heap of humanity, but her labored breathing and my examination showed a hopeless case of pneumonia, the very end of it, and there was nothing to be done.

The next building is the Settlement House, and the children sang that old Christmas hymn, "It Came Upon the Midnight Clear." My little patient listened to the soft tones, her face showed the peace that passeth all understanding, and soon she went to the land where there is no sorrow, no heartache.

I went out in the cold winter's evening, wending my way through the happy home-going crowds, and in my ears rang again and again: "It Came Upon the Midnight Clear."

This is not a story, it is just the heart-breaking account of an ignorant, poor family, who did not have enough money to get a doctor, and were too proud to seek charity until too late. You to whom this land has given wealth and riches, you worry about what you are going to wear at Mrs. So-and-So's reception, and your sister, way down in her dark and airless tenement—your sister looks upon her dying child and prays that God—the same God who gave you your wealth—shall save her child. There is no doubt that you send every year a check to the charity, and the Jewish charity organization waits until an application for help comes in, and then starts to investigate, but you know that our people do not beg, they suffer and suffer, and die. We stand upon the holy soil of a country who gave you and me the divine right to do as we please; but to do right, and we owe a great debt to this country for the liberty no other land will give us, and to pay that debt we must see that those who are of our religion shall be provided for.

The physician who does the district work among the poor will tell you that nine out of ten fatal cases are due to the gross ignorance, or well-known indifference of the people; but then the facilities to get a physician are not so easy as you think. If the patient goes to a dispensary

he must stop his work for the time being, must wait hours and hours, and then be the subject of a general examination of students; if he goes to the district mission, a student will come to see him, and he will get the benefit of that student's knowledge and experience. So the only way out of it is to employ graduate physicians, exclusively, for the work. Of course it is essential that the doctor who takes this work shall not do it for mere experience sake; his highest ambition should be to do good, to be not only a physician, but a friend and adviser to those who demand his services.

A few months ago—on the day of a big blizzard—a pale-faced little nurse left the hospital, and with her heavy emergency bag, she fought her way through snow and storm until every call on her list was made. Only a few days later the same nurse occupied a bed in the ward, and there she fought again a fight of life and death through a pneumonia crisis. I passed the ward at night, and in the dim light I could see her sister nurse standing at the bedside of that little heroine, one hand on the lever of the oxygen tank and the other on her patient's pulse. So she stood the whole night, watching for that spark of life, that spark that was in danger of being extinguished forever, in her service as a district nurse. Those are the silent heroes of our noble profession, of whom you do not hear in song and word, but who will sacrifice their lives for the sake of suffering humanity—for the sake of duty. You will hardly understand the battle against infection, etc., those girls have to fight, but the physician who finds that silent watcher on the bedside of his patient knows that it is not always he who saves the patient's life, but the women in blue, who, in the dark hours of danger, stand and fight with their patients to conquer death.

There is a crying need for district physicians and nurses in this settlement, for the cosmopolitan sections. Doctors and nurses should be employed who speak at least German, so that they may feel at home with their patients, and make those people feel that they are understood. As for you—you may do a whole lot of good with your contributions, but you ought to take an active interest in the work, because it is our people who suffer, and the world points at you in some sad occurrences, and says: "Why do not those well-to-do Jews help them?" They know that our people do not burden the community for support, and one single case will produce more prejudice than anything. Do not call it charity, but it is your duty to see that the people of our religion shall not be free patients in hospitals; it is your duty to see that no pauper grave shall close over a Jewish body, and that those who are sick shall have the services of a doctor and nurse employed by you.

This paper is not an oration or literary creation. I do not profess to be one or the other. In the short time of my citizenship I tried my best to pay my gratitude to this country in being a good citizen, and I think I have succeeded. It was a few days ago, at 5:30 A. M., that I wrote this paper. From my little office in the hospital I could see the Star-Spangled Banner over the Armory, that glorious old flag that has given you and me the liberty of this, our country, and I feel that I should stand up in a silent salute for our flag, the flag of our country, the United States of America.

[Written for the MEDICAL BRIEF.]

The Treatment of Entero-Colitis.

BY ROBERT C. KENNER, A. M., M. D.,
Louisville, Ky.

The return of summer will not fail to be marked by the prevalence, to a greater or less extent, of entero-colitis. In fact, the disease has come to be regarded as the scourge of this season, and to it is charged the greatest percentage of infant mortality. There should be an intelligent effort put forth in all instances to prevent the development of entero-colitis. This is best carried out in proper feeding, and sustaining the vital forces of infants. A properly fed, well-nourished child is not so vulnerable, and they escape with no damage—or with only slight attacks—when a feeble infant would be completely overthrown. The main points, then, in the prevention of entero-colitis, are adequate and proper feeding, avoidance of exposure to excessive heat, and other influ-

ences that cripple the resisting powers of the infant.

In either the acute or chronic expressions of entero-colitis, the indications for treatment are practically the same. Of course, after the disease has taken on chronicity, the patient demands more attention, as regards diet, nursing, etc., but the essential problem is the same.

When it is possible these patients should be given a change of residence. Removal from the city to a rural district, where the patient can be given comfort and fresh air, is of the greatest advantage. Unless, however, a well-selected country residence is chosen, often the patient is not assisted, and the very reverse has often been noticed.

The question of feeding, that of giving the patient adequate and proper food, is one that is very important. In fact, it is essential to the successful conduct of the case, and the continuance of life. Children at the breast rarely need any alteration of diet, unless it be found that the breast milk is defective, or that mothers have given them table foods. All of these points and others are to be carefully considered. If the infant has been weaned, then it is necessary to carefully enter into the question of feeding. If it should be that the child has recently been weaned, it is often the wise course to obtain a wet nurse for it, and to attempt, for a season, no other form of nourishment. When it is a question of feeding the child—simply that—we have to decide what means is most suitable.

Various infant foods are valuable. I have found many of them to be oak and rock, as it were, in these cases, but in the last two years I have depended to the greatest extent on goat's milk. This food presents some advantages that I have not been able to obtain from any other means at my command for the proper feeding of infants who have been, for any reason, deprived of their mother's breast. In Germany and on the Continent generally goat's milk is largely used as an infant food. Goat's milk differs in formula less radically from woman's milk than does that of the cow, and it has been taken by a great many infants under my observation. For convenience, I give a general exhibit of the various constituents of milk of the animals on whom dependence is made for assistance when the mother's breast is denied.

COMPOSITION OF MILK OF MAN AND OTHER ANIMALS.

One thousand contain the following ingredients:

	Specific Gravity.	Fluid.	Solids.	Sugar.	Fat.	Casein and Extractives.	Salts.
Woman	1032.67	889.08	110.92	43.64	28.68	39.24	1.36
Cow	1033.38	864.06	135.94	38.03	36.12	55 15	6.64
Ass	1034.57	890.12	109.88	50.46	18.53	35.65	5.24
Goat	1033.53	844.90	155.10	36.91	56.87	55.14	6.18

It will be seen that goat's milk is rich in all those properties that nourish the growing infant. One great advantage to be scored by goat's milk is that it can be obtained fresh at any moment. The goat can be kept close to the house, and can be milked just when the infant is to be fed. This is an immense advantage, and can be secured in no other way so conveniently. The advantage that has been secured to infants under my charge, by the goat, has been inestimable. In this connection it is very important that the goat be fed and housed properly. They must be fed good hay, given water, and good beds, and not allowed to run on the commons and devour the waste, as is often done by goats. This point is so essential that I never fail to bring it home thoroughly to the minds of parents and nurses. Still, I must not fail to say that a small amount of codliver oil, in emulsion, given to these patients, twice daily, greatly aids nutrition.

Now, about the remedial measures. I find that it is necessary to unload the intestinal canal every third day, or every fourth at the farthest. This is accomplished by the administration of castor oil. A drachm of castor oil to a child one year old is often enough, but a larger quantity can be given with impunity, as children bear approximately more of this drug than adults. I usually administer castor oil in emulsion. The following is a favorite formula with me:

℞ Castor Oil ..... ½ ounce.
Oil of Peppermint..... 1 drop.
Mucilage of Acacia, enough to make..... 2 ounces.

M. Sig.: Shake vigorously until emulsified. Give patient a tablespoonful as often as necessary.

After the castor oil has moved the bowels, it is my custom to begin the administration of an intestinal antiseptic and soothing sedative to the intestine. These indications have, in my hands, been fulfilled in salol and subnitrate of bismuth. The following is a formula that I use often. It is calculated for a child eighteen months old:

℞ Subnitrate of Bismuth..... 3 drachms.
Salol.....16 grains.
Peppermint water..... ½ ounce.
Mucilage of Acacia, enough to make..... 3 ounces.

M. Sig.: Shake well, and give a teaspoonful every two, three or four hours as the indications in the case in hand seem to warrant.

It is not wise to continue this remedy uninterruptedly. Even though the movements of the bowels are lessened, we are to give, every third or fourth day, a dose of oil to clear away mucous exhalations and retained feces that would, otherwise, poison the blood stream, and work greatly to the detriment of the patient.

In some cases it will be found necessary to give an opiate, in order to restrain the diarrheal discharge. This can be given hypodermically, in these particular cases, with the greatest advantage. The employment of stimulants is necessary in many cases. I prefer merely diluted French brandy. I have no sugar admixture, since all sweets are to be avoided, as far as possible in this affection, for the reason that they superinduce, in many instances, intestinal fermentation, a thing we are studiously avoiding.

After convalescence is well under way we should put the patient on one of the wines of codliver oil. These remedies possess great value and have the merit of palatability, a feature that must address itself to all practitioners who have had much in hand the treatment of infants.

[Written for the MEDICAL BRIEF.]

Of the Imagination in its Relation to Disease.

BY P. C. SUTPHIN, M. D.,
Canmer, Ky.

In any consideration of the subject of the imagination in its relation to disease, quite a *quaestia vexata* presents itself in determining, at all times, as to the true relation between the two. Not infrequently, for instance, we meet with cases that we regard as mostly or altogether imaginary, but which turn out to be genuine cases of disease; while, on the other hand, we sometimes meet with cases of supposed real disease that prove to be imaginary. I have every now and then, in the course of my practice, met with both of these kinds of cases, and, talking with other physicians on the subject, I found that they had also had a like experience in this line.

Such being the fact, therefore, we have, as just said, quite a "vexed question" confronting us in determining at all times as to the correct diagnosis in such cases, and hence as to the proper treatment of them. I have known it the case, in fact, where both the diagnosis and treatment in some of these cases being incorrect, brought into serious question the professional ability of the attending physician, even leading on this account, sometimes, to his dismissal from the case. I call to mind a case of some years back, that passed from the hands of a physician attending it, who had treated it for hysteria, with no benefit, and who was dismissed from the case, it passing over to the care of another physician, who diagnosed it as an obscure, though genuine case of disease, and treating it, accordingly, in due time effected a cure.

It is thus, therefore, that these errors of diagnosis and treatment occur in these cases; nor is it unnatural that such should be the case, in so many instances, where the predominant symptoms are misleading to such an extent as to make the diagnosis difficult, or it may be, sometimes, even impossible. We may boast, in fact, of our diagnostic acumen, but still there are probably but few physicians of any length of practice, who, at some time, have not had some case in which it was difficult, or it may be impossible to form any ready or certain diagnosis of it. I have known it the case, in fact, where the attending physician, uncertain as to the character of some case he was waiting on, had called in one or two other physicians to help him "untangle" it, with no two of them, however, agreeing as to it, and each presenting a different view of it.

Now, admitting as correct what I have said about these difficulties or errors of

diagnosis in these cases, we have the fact established that they have been more or less common in the field of medicine generally; nor could they be said to detract, as a rule, from the professional ability of the physician, as sometimes unavoidable, even when the greatest care and the best judgment are brought to bear to prevent them. In fact, the imagination may be said to play a more or less prominent part in many cases of disease, whilst a successful play on it often does more good than medicines. In evidence of this, take the number of diseases—or probably we might say supposed diseases—cured *cito et jucunde*, or quickly and agreeably, by the Christian Scientist. These cases may, some of them, have been under the treatment of the "best doctors," and having been thought "serious," or it may be incurable, by the patient or friends, under the ordinary medical treatment, were superstitiously handed over to the Christian Scientist, who, by talk, turning the current of a morbid imagination into a more healthful channel—what was mostly needed—thus soon had the patient "on foot."

Now, these cases are highly illustrative of the close relation existing between the imagination and disease; whilst if we take the many of such cases, primarily or secondarily treated by these so-called scientists, then with these and the many similar cases that would be treated by them, when possible to secure their services, is seen the prominent part the imagination plays in many diseases, not infrequently confusing the diagnosis, or leading to errors, in them.

Speaking of this confusion or error of diagnosis, I am reminded of a case I had some years ago, that for some time was quite a puzzle to me, thinking, as I did, that it was a veritable case of bodily disease, which turned out in the end, however, to be the mere "baseless fabric of a dream," or freak of the imagination. The case was that of a stout, able-bodied farmer, living some three miles from me, who, complaining of his bowels "hurting" him, took to his bed and sent for me to attend him. Going to see him, upon entering his room and approaching his bedside, I asked him as to his complaint, which he informed me was a "constant hurting in the bowels," and this he said he had had for several days, and as it got no better, he thought it best to send for me and have something done for it. I now carefully examined as to his bowels, employing pressure upon the abdomen, so as to fully include these, but found no tenderness anywhere; whilst the tongue was clean, and pulse and temperature were normal. Thinking that there might be some vitiated condition of the contents of the bowels, I left him a hydragogue cathartic to properly cleanse these. When taking my leave, I told him to send for me again if necessary. In some four or five days he sent for me again, informing me, when I saw him, that he was "no better." Now, changing my diagnosis to the supposition that there might be possible "intestinal indigestion," with some probable autotoxic complication, requiring digestives and antiseptics for the correction of these, I put him on this treatment, to be kept up for some days, and, leaving him, told him to send for me again, if need be. This he did some days afterwards. When visiting him I found him still "no better." Now, thinking that there might be some obscure subacute inflammatory condition of the bowels that had eluded my investigation, I put him on a tentative treatment for this. He continued on this some ten days, when he again sent for me; not seeing, as he said, that he had "improved any." Being now—to use a common expression—at the end of my journey as to any further medical treatment of the case, I was about to call for consultation in it, when, having noticed that his pulse and temperature had been normal throughout, with tongue clean and appetite good, I now came to the conclusion that it was for him, rather than myself, to cry out *peccavi*, and so I made bold to tell him that having waited on him for a month, and given the greatest care and most patient investigation to his case, I felt called upon to tell him that he was altogether mistaken in being sick in the way that he supposed he was; that his case really originated from an acute morbid condition of the nervous system acting upon the imagination; that the more he kept it in his thought the

more permanent and of more possible wider spread it might become, and that my advice to him, therefore, would be to get out of bed and resume his work on his farm, and think no more of his case. I scarcely thought that he would agree to this, but the advice seemed to please him in the assurance that he had no such disease as he supposed he had, and so next morning he arose from his bed, donned his "working clothes," went to work on his farm, and continued at it. That ended the case.

This rather *in extenso* account of this case I have given as showing, more fully, the part not infrequently played by the imagination in simulating disease, and in confusing and rendering difficult its diagnosis. It may be said, it is true, that in the case just stated, I ought, in a month's time, to have been able to form a proper diagnosis of it before I did, but following out, as the safest guide, the old Latin adage of *festina lente*, or hasten slowly, in the case of one of an athletic constitution, and supposedly free from such imagination as that exhibited by him. In order to make no mistake in the case I deemed it best, rather than form a hasty, permanent diagnosis of it, to proceed slowly, and wait for developments in it, to determine its true character. And it may be said, *en passant*, that this course might be a profitable one to pursue in many diseases outside of those more especially connected with the imagination, as just named—that is to say, where they are not fully developed as to their true character, the better course to pursue would be to "hasten slowly" as to the diagnosis, with the treatment tentative as the symptoms might call for, and thus continued until a definite and correct diagnosis could be determined on, with its more appropriate treatment. In saying this, I am reminded of two cases that came to my knowledge, now some years ago. The first was a case that an old and leading physician of my acquaintance was called upon to attend, who, seeing the case, pronounced it, without hesitation, a serious case of typhoid fever; duly prescribing for it as such. Returning to see the case a day or two after that, he found the patient thickly "broke out" with measles. The other case was one that another physician, also an acquaintance, and a learned and popular practitioner of experience, was called to take in charge, and in his first visit to his patient—a young man—finding him with a cough and complaining of more or less distress about the lungs, he diagnosed the case as one of broncho-pneumonia, and prescribed for it accordingly. Returning a day or two afterwards to see how his patient was "getting on," he found him, also, as in the first case, just spoken of, thickly "peppered out" with measles.

This, however, as just said, by the way; though in these latter cases, as well as those more especially associated with the imagination, or, as it may be, altogether imaginary, we have furnished us a valuable lesson in the way of being careful at all times in our diagnosis, or in cases where the symptoms are obscure, "mixed" or uncertain, to pursue a course of "masterly inactivity" in the diagnosis, and wait for developments to determine as to its true character.

[Written for the MEDICAL BRIEF.]

Taken by Surprise.

BY SILAS HUBBARD, M. D.,
East Aurora, N. Y.

I have known a number of young physicians to be surprised, in delivering a woman at full term, to find only two or three ounces of amniotic fluid. I have known a number of young physicians to be surprised and alarmed, after delivering the woman of the child, that forthwith in delivering the afterbirth a great, sudden gush of a quart or more of amniotic fluid, stained with blood, occurred, while in reality the uterus was well contracted after the gush. The explanation of it would be that in the last pains which expelled the child, the placenta was detached and stopped up the os uteri, and folds of the membranes retained the amniotic fluid, so that when the placenta was expelled the large quantity of amniotic fluid simultaneously followed, and the uterus contracted.

Book Notices.

WHAT TO DO IN CASES OF POISONING. By William Murrell, M. D., F. R. C. P., Physician to the Westminster Hospital; Lecturer on Clinical Medicine and Joint Lecturer on the Principles and Practice of Medicine; Examiner in Materia Medica in the University of Aberdeen; late Examiner in the Universities of Edinburgh and Glasgow, and to the Royal College of Physicians of London. Tenth edition. London, Eng.: H. K. Lewis, Publisher. Price in America, $1.25..

Even though there are many works on "what to do" in cases of poisoning, we have a work before us that is the peer of them all. A work that has been translated into all foreign languages, because it so fully meets the requirements. DR. Murrell had no personal or pecuniary interest in mind when he used his valuable time to write this work; he did it from a heartfelt interest of the sufferer from drug addictions of whatever nature, whether from evil or innocent intentions. The whole field is covered so completely that nothing more could be added to the subject. It is a work that should be in the hands of every American physician and graduated nurse.

THE STANDARD FAMILY PHYSICIAN. A Practical International Encyclopedia of Medicine and Hygiene, Especially Prepared for the Household. By Professor Carl Reissig, M. D., of Hamburg, Germany, and Smith Ely Jelliffe, A. M., M. D., Ph. D., Professor of Pharmacognosy, Pharmaceutical Department Columbia University; Instructor in Pharmacology and Therapeutics, Medical Department Columbia University; Visiting Neurologist, City Hospital, New York; Associate Editor *New York Medical Journal;* Managing Editor of *Journal of Nervous and Mental Diseases.* With the Assistance of Many American and German Specialists in the Treatment of Diseases and Experts in Medicine and Surgery. In two volumes. New York: Funk and Wagnalls Company. Price, per set, buckram, $15.00; three-quarters morocco, $20.00.

This work is fully illustrated; the illustrations are of such a nature that home reading is not barred. It is the first work of this nature that has the endorsement of the educated men of the profession, such as William T. Bull, M. D., William M. Polk, M. D., LL. D., Lewellyn F. Barker, M. D., L. E. Holt, M. D., Thomas Darlington, M. D., William A. White, M. D., David Webster, M. D., Frank E. Miller, M. D., Hills Cole, M. D., Clarendon Rutherford, M. D., Harry V. Werdeman, M. D., Edgar H. Thornton, M. D., Ph. D., Samuel H. Durgin, M. D., Andrew Wade Morton, M. D., J. Welsey Bovee, M. D., David Todd Gilliam, M. D., E. Edmonston, M. D., William O. Rau, M. D., Hugh Cabot, M. D. When such celebrated men take an interest in a work for the family it is well worthy for family use, and certainly a protection for the physician. This is the first work on the subject matter, for the family, prepared by such an array of celebrated physicians—the best educated men in the profession—and draws the inference that the family should be educated along certain lines, and thus aid the physician in his duties. It is a fact that the better educated the patient the better are the results of treatment.

A MANUAL OF PATHOLOGY. By Guthrie McConnell, M. D., Pathologist to the St. Louis Skin and Cancer Hospital and to St. Luke's Hospital; Bacteriologist to the Missouri State Board of Health; Formerly Assistant Pathologist to the Philadelphia City Hospital. Illustrated. Philadelphia and London: W. B. Saunders Co. Price, $2.50.

This work is written more for the student than the general practitioner, who no doubt has in his library more voluminous volumes on the subject, and if not he certainly should secure some, because he knows that this branch of medical science treats of the modifications of functions and changes in structure caused by disease. All physicians, whether in his student days or as a general practitioner (all practitioners should be students), should have a good work on Pathology.

DICTIONARY OF OPHTHALMIC TERMS. By John Welsh Croskey, M. D., Ophthalmic Surgeon to the Philadelphia Hospital and the George Nugent Home for Baptists; Consulting Ophthalmologist to the Prince of Peace Hospital, Philadelphia. Second Edition. New York: Frederick Boger Publishing Co. Price, pasteboard cover, 25 cents; limp leather, 50 cents.

To a physician practicing where a specialist is not at hand and he is called on to examine the eyes and write a prescription, this book is invaluable.

GILLETTE'S SOCIAL REDEMPTION. A Review of World-Wide Conditions as They Exist To-Day, Offering an Entirely New Suggestion for the Remedy of the Evils They Exhibit. With illustrations and index. By Melvin L. Severy, Author of "Fleur-de-Lis," "The Darrow Enigma," "The Mystery of June 13th," etc. Boston: Herbert B. Turner & Co.

To give an idea as to what this work is we quote the dedication: "To all those who, lighted by the first dawning rays of the newly risen social sense, have renounced the red ethics of the competitive jungle and begun their migration from selfdom to 'otherdom.'" Quintilian says: "While we are examining into everything we sometimes find truth where we least expected it." Thus it is that in this work we find truths that we have not found elsewhere. As Plautus said: "I love truth, and wish to have it always spoken to me—I hate a liar." This work has certainly truthful thoughts, and is worthy a careful reading. The author says the plan of this work is the initial step, is presented to the public in the firm belief that it will, if adopted, do more to eradicate the sufferings of all human kind than any plan hitherto proposed. Neither the inventor of the plan nor the author of this work has any selfish interest in the movement. It is placed before the reader so that he will digest the good points for his guidance in the betterment of the human race. It should be read by all who have faith in anything that will be for the advancement of personality in the human being.

ANESTHETICS AND THEIR ADMINISTRATION. A Text-Book for Medical and Dental Practitioners and Students. By Frederic W. Hewitt, M. V. O., M. A., M. D., Cantab., Anesthetist to His Majesty the King; Physician-Anesthetist to St. George's Hospital; Consulting Anesthetist and Emeritus Lecturer on Anesthetics at the London Hospital; Member of Staff of King Edward VII's Hospital for Officers; late Anesthetist at Charing Cross Hospital, the Royal Dental Hospital of London, the Royal Hospital for Children and Women, and the National Orthopedic Hospital. Third edition, with illustrations. London: Macmillan & Co., Ltd.; New York: The Macmillan Company. Price, $4.00.

More attention has been given to this subject by the examining bodies, and the colleges have given it more attention than formerly; it would, therefore, be a matter of wisdom for all practitioners and students to secure the latest edition of this well-known text-book on the subject, as many changes have been made, especially in relation to the important feature of general anesthesia and the so-called "acid intoxication." This work is a standard authority, and should be at hand at all times.

MATERIA MEDICA AND PHARMACY. By Reynold Webb Wilcox, M. A., M. D., LL. D., Professor of Medicine at the New York Post-Graduate Medical School and Hospital; Consulting Physician to the Nassau Hospital; Visiting Physician to St. Mark's Hospital; Ex-President of the American Therapeutic Society; Fellow of the American Academy of Medicine; Member of the American Medical Association; Vice-Chairman of the Revision Committee of the United States Pharmacopeia, etc. Seventh edition, revised. Philadelphia: P. Blakiston's Son & Co. Price, $2.50.

There are many works published on this subject, but each one seems to be different in some respects. That this work has had a place that is pleasing and instructive would be suggested by a seventh edition—that a work has been sufficiently instructive to create a demand for a seventh edition should be a laudable criterion of its worth. It is well, in purchasing a book, to know that so many of the profession have seen good in it.

HINTS ON THE MANAGEMENT OF THE COMMONER INFECTIONS. By R. W. Marsden, M. D., M. R. C. P., D. P. H., Honorary Physician to the Ancoats Hospital, Manchester; Honorary Assistant Physician to the Manchester Hospital for Consumption; Formerly Medical Superintendent Monsall Fever Hospital, and Clinical Lecturer in Infectious Diseases, Owens College, New York: E. B. Treat & Company. Price, $1.50.

How often a physician is puzzled over the treatment of the common infections! If the trouble is grave and intricate he consults his text-books on the subject to widen his scope, but if the common disturbances he does a whole lot of guessing as to what is best. Sometimes he is puzzled even then, because the trouble is persistent and he asks himself *Why?* This work will refresh his memory on such things and thus lead him into new channels of thought. Read it and you will be benefited.

MORRIS'S HUMAN ANATOMY. A Complete, Systematic Treatise by English and American Authors. Edited by Henry Morris, M. A., and M. B., Lond., F. R. C. S., Eng., President of the Royal College of Surgeons of England; Consulting Surgeon to Middlesex Hospital, London; Honorary Member of the Medical Society of the County of New York; Formerly Chairman of the Court of Examiners of the Royal College of Surgeons; Examiner in Anatomy in the University of Durham, and Examiner in Surgery in the University of London; and J. Playfair McMurrich, A. M., Ph. D., Professor of Anatomy, University of Michigan; Member Association of American Anatomists; Member of Advisory Board Wister Institute of Anatomy, etc. Ten hundred and twenty-five illustrations, three hundred and nineteen printed in colors. Fourth edition, revised and enlarged. In five parts. Parts III, IV and V. Philadelphia: P. Blakiston's Son & Co. Price, Part I, $1.50; Part II, $2.00; Parts III and IV, $1.50 each; Part V, $1.00. Also bound in one volume, cloth, $6.00; leather, $7.00.

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A MANUAL OF SURGERY. For Students and Physicians. By Francis T. Stewart, M. D., Professor of Surgery, Philadelphia Polyclinic; Associate in Surgery, Jefferson Medical College; Surgeon to the Germantown Hospital; Out-Patient Surgeon to the Pennsylvania Hospital. With five hundred and four illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $3.50.

The student and practitioner of today needs an ever-present guide on surgical conditions that is devoid of the verbiage and non-essential features that go to make up a large volume. A work of this size must necessarily be concise, and at the same time as complete as the simple facts can make it. The author has fully accomplished this task, as a casual glance at its pages will fully reveal. There are many original illustrations given which lend worth to any work. We predict for this work a large sale.

OBSTETRICS FOR NURSES. By Joseph B. De Lee, A. M., M. D., Professor of Obstetrics Northwestern University Medical School; Obstetrician to Mercy, Wesley, Provident, Cook County, and Chicago Lying-in Hospitals; Lecturer in the Nurses' Training Schools of same. Second edition, thoroughly revised and enlarged. Philadelphia and London: W. B. Saunders Co. Price $2.50.

We believe the book will be found useful to nurses, medical students and young practitioners, and older physicians can glean many good points from its pages.

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Editorial.

Why Physicians Do Not Prescribe United States Pharmacopoeia and National Formulary Preparations.

The author of a paper which recently appeared in the *Alumni Report*, published by the Alumni Association of the Philadelphia College of Pharmacy, says that as a result of the examination of one thousand prescriptions from two of the leading drug stores of Philadelphia, he found that thirty-five per cent contained proprietaries. Mr. Edward Bok, the editor of the *Ladies' Home Journal*, who has taken it upon himself to give instructions to physicians, examined one hundred prescriptions in the same city, forty-two of which contained proprietaries. Mr. John B. Thomas, of Baltimore, according to our author, examined the prescriptions from six sections of his city, five hundred from each section, and found about the same proportion of proprietaries were prescribed in Baltimore as at Philadelphia. Now, why is it that, in spite of a foolish agitation against proprietaries, physicians keep on using them? The answer is plain. They have, by experience, found that they gave satisfactory results. They know them to be uniform, and, having in view the restoration of their patients to health, they, as practical, honest men, use those agents which they think will most certainly secure this end.

The writer of the article to which we have referred deplores the fact that physicians will continue to go on prescribing proprietaries instead of the U. S. P. and N. F. imitations. He says he can not see how educated physicians will insist on using proprietaries when there are nine hundred and fifty-eight official preparations in the Pharmacopœia and four hundred and eighty-six in the National Formulary. Unwittingly, he answers his own question. Without intending to do so, he solves the problem himself. For later on in the same paper, he says that pharmacists, as a class, are ignorant, both of the

Pharmacopœia and the National Formulary. He says:

"Ignorance of the Pharmacopœia and National Formulary is also applicable to the pharmacist.. Within the past week I saw a letter written by one of the leading wholesale and retail drug establishments, in a large city near the center of this enlightened commonwealth, to a pharmacist here in Philadelphia, asking him what Liquor Ceresolis Compositus was and *who prepared it.* Last fall, after the Pharmacopœia had been official for over a year, the chief prescription clerk of one of the leading drug stores of Philadelphia called me on the phone and asked the same questions relative to this preparation. *I could enumerate numerous instances of this kind, but these will suffice.*"

Now, even if doctors *wanted* to use the so-called official preparations exclusively, they would not take the risk of prescribing them if the druggists, even in a city like Philadelphia, who live right in the shadow of the best pharmaceutical college in the world, are so ignorant (as this writer says) as not even to recognize them when they are prescribed. And if they do not know them by *name*, how in the name of heaven can they be depended on to compound them? Physicians are well aware of the deficiencies of the druggists, according to our author, and regret it; and yet they must recognize it as one of the conditions of this commercial age, and the druggists can hardly be blamed for its existence. Why, how can a druggist be expected to know all the numerous official preparations and how to compound them? The fact is, it has reached the point when the medicine sold in the average drug store does not amount to over twenty-five per cent of its total sales. Medicine in a drug store has, indeed, gotten to be a "side line." The bulk of the sales is made up of soda-water, confectionery, toilet articles, stationery, postcards, and thousands of other articles in no way connected with medicine. Under these circumstances it would be folly to expect any one druggist to carry in stock all the drugs contained in the one thousand five hundred official preparations; or, if he carried them all, and kept them in good condition, it would not be practicable for any one man to be able to skillfully compound so many preparations, and especially when the sale in them constitutes so small a proportion of his total business. But our author gives a still stronger reason why physicians can not afford to stick to the official preparations, for he tells us that: "*A large number of pharmacists do not possess a copy of the last Pharmacopœia, and only a small number, comparatively, possess a copy of the third edition of the National Formulary.*"

Now, in the name of common sense, how are they going to compound the preparations named in these books when they have not even in their possession copies of them?

It is this state of affairs in the drug trade, and the consequent inability of the doctors to get their prescriptions compounded accurately and with uniformity, that has caused them to turn to and rely on the ethical proprietaries. These, he *knows*, are always the same; they are besides, prepared nicely and represent the greatest skill in elegant pharmacy, and can always be relied on. And when he finds one that gives good results he sticks to it, and he does not care how much he is criticised for doing so by the officials of the medical societies, for he realizes that they are only making a show of doing something in order to hold their jobs, and to bring them into notoriety.

One Reason Why Physicians Prescribe Proprietaries.

No man stands higher in pharmaceutical circles than Professor Edward Kremers, Dean of the School of Pharmacy of the University of Wisconsin. He can not be suspected of being unfriendly to pharmacy, and what he may say about conditions in that professions may, we think. be accepted as true. From a recent address delivered by him, which we find in the *Southern Druggist*, we make the following extract:

"The druggists who organized the Wisconsin Pharmaceutical Association in 1880 lived in the hope that the next generation of pharmacists would be well educated generally, and possess a good tech-

nical training. But what has been the result? The drug store has become less and less efficient as a training school for pharmacists, and yet how few of our apprentices and clerks seek a college education? The cramming schools, which some of them attend preparatory to the State Board examinations, have no educational or technical value whatever. Aside from the personal advantage that the attendants may successfully pass the examination, they are a positive harm to the individual and an increasing menace to the profession.

"Many of the candidates before the State Board can not write ordinary English; fully as many can not do simple problems in applied arithmetic; still smaller is the number capable of logical thinking. They may be excellent salesmen of toilet articles; they may be able to discuss the latest football news while selling cigars; they may be experts in avoiding the payment of a saloon license, as has been the case with hundreds of druggist-saloonkeepers in Massachusetts, Kansas and other States; *but they are not pharmacists to whom we should like to entrust the lives of our sick relatives and friends.*"

All well-informed physicians know that what Professor Kremers says is true. They know, also, that conditions all over the country are as he says they are in Wisconsin. And, having a regard for their patients, and for their own reputations, they hesitate about sending prescriptions to the drug stores, the proper filling of which require the highest pharmaceutical skill. And this is one of the reason why they use so many of the ethical proprietaries. They know that these latter preparations, as a rule, are uniform, and are compounded of the best and purest drugs, and hence can be relied upon.

The Blind Following of Authority.

Before the British Medical Association, at its recent annual meeting, Dr. W. Hale White delivered an address in which he severely condemned the tendency towards the "blind following of authority," which, it seems, prevails not only in this country but in England also. According to this learned doctor, this unfortunate tendency constitutes the greatest drawback to progress in medical science. He said: "Accept nothing on authority, but look for yourselves, and see if the usual teaching is true; believe nothing you do not see; be skeptical about everything you are told."

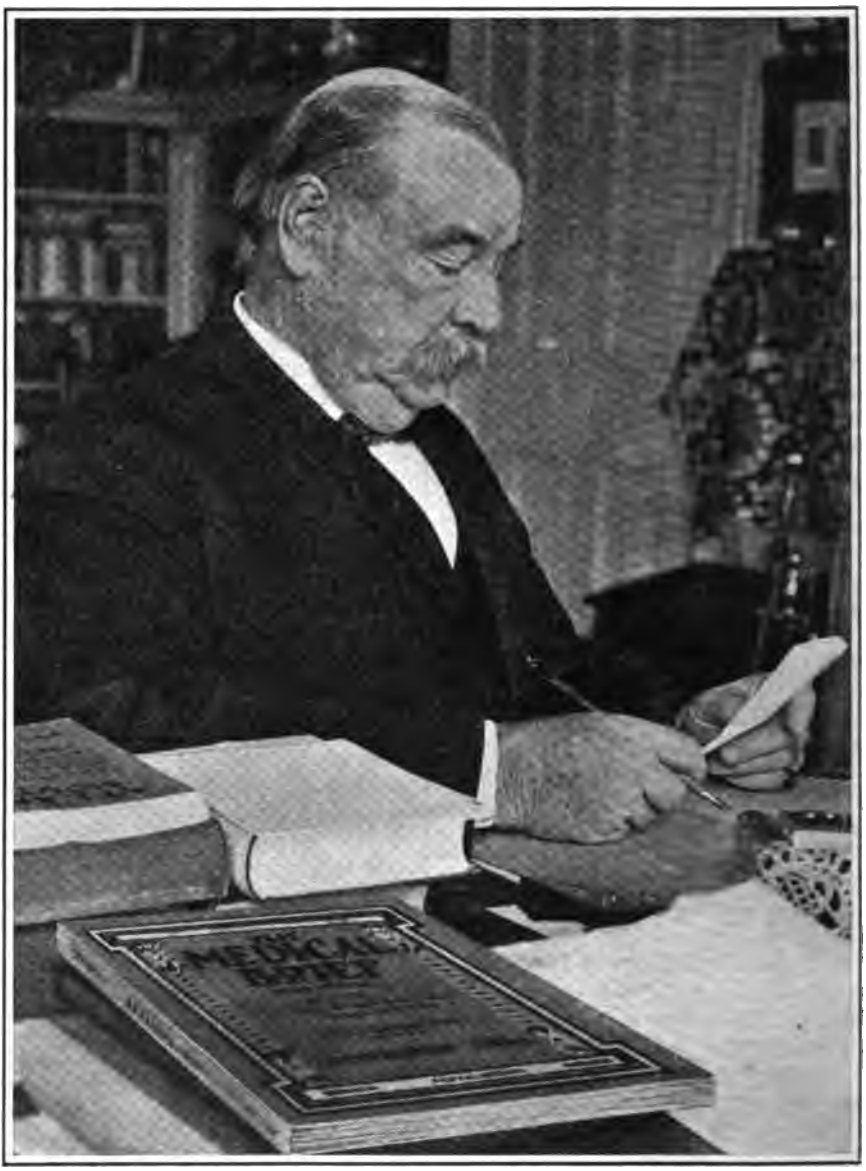
While we are not prepared to go quite as far as Dr. White went, yet it remains that he is correct when he says that the blind following of authority is one of the greatest impediments to progress, and that advancement is possible only to the man who thinks for himself. This does not mean that every announcement from a doctor of distinction is to be met in a spirit of antagonism, but it should not be accepted as true simply because some physician of repute enunciates it. It is entitled, probably, to greater consideration when it comes from a recognized authority, but it should, in all cases, be made to stand the test before it is accepted and acted on. The actual, practical experience of the average doctor is worth more to him than the *ex cathedra* teachings of the physician in authority, however distinguished he may be.

Our minds are given us to think, and unless we exercise our faculties they finally become stunted.

During the past three or four years the physicians of the United States have been treated by a political clique in charge of one of the medical societies as if they were little children. They have been instructed as to how they shall act, and even as to what drugs they shall prescribe, and have been threatened with professional ostracism if they do not comply. Such conduct on the part of a few men in official position has caused a great many physicians to rise in revolt. These physicians realize that the officials referred to are only trying to increase their own power and emoluments, and, like men, they have manifested their resentment at the attempted interference with their liberties as individuals.

The true physician is always looking for light. He is aware that he does not know it all, and, therefore, he is glad to learn from every source. But he refuses to be dictated to by any man or set of men.

the general public. That would be useless as a demonstration, for enough names have been given to show how far short science, medicine, and letters would have fallen durdolle did not mention such famous Englishmen as Lord Nelson, John and Charles Wesley, Lord Tennyson, Dean Stanley, John Keble, Matthew Arnold,



GROVER CLEVELAND, TWICE PRESIDENT OF THE UNITED STATES, SON OF A CLERGYMAN

From a stereograph—copyright, 1906, by Underwood & Underwood, New York

ing the past two centuries but for well-trained and well-educated sons of clergymen.

It would, indeed, be easy to lengthen out the lists. For instance, M. de Candolle and Lord Curzon of Kedleston. He gave no American names save those of Agassiz and Emerson; he might have included Jonathan Edwards, Increase and Cotton Mather, John Han-

(BY PERMISSION OF THE FRANK A. MUNSEY COMPANY.)

A Reader of the Brief.

Among the large number of subscribers to THE MEDICAL BRIEF there are a few lawyers, clergymen, scholars, etc., who have been on our list for a long time, taking the paper, presumably, on account of its editorials, since they can hardly be interested in purely technical medical literature. One of these is Grover Cleveland, the distinguished and universally esteemed ex-President of the United States.

In *Munsey's Magazine* for September, in an article on the Distinguished Sons of Clergymen, is a sketch of Mr. Cleveland, together with a photograph showing the great statesman seated at a table in his library. Before him lies a copy of THE MEDICAL BRIEF, which, evidently, he has just finished reading and laid upon the table.

We have reproduced the page from *Munsey's* herewith, as we thought it might please some of our subscribers to know the distinguished and honorable company they keep. The editor of the BRIEF has always been an admirer of the ex-President, and he only wishes, in these times of unrest, turmoil and agitation, that Mr. Cleveland's conservative and steadying influence could be felt in the counsels of the nation.

[Written for the MEDICAL BRIEF.]

Eye Strain.

BY JOHN W. WRIGHT, M. D.,

Professor of Ophthalmology in the Ohio Medical University.
Columbus, Ohio.

Eye strain is at present at high tide. To it are attributed numberless maladies, for not only what is termed the "functional neuroses," but crime, imbecility, incorrigibility and hopeless depravity are often laid at its door. While defective vision may, and doubtless often does, influence the character of the individual, especially in children, eye strain probably does not to a very great extent. However, there should be made a most searching study of both, especially when regarded in the light of affecting not only the physical but the moral condition of the individual.

Eye strain does not usually exist in high degrees of refractive error, for in such cases, if correcting lenses are not applied, the patient can not by accommodative effort sufficiently acquire anything like normal vision. He is, therefore, incapacitated to perform a service requiring good vision; when, if an adult, he is compelled to accept menial avocation that does not require acute vision, and thus he is often associated with those whose companionship might deprave his character.

In the child it is unfortunate if the defect is allowed to go uncorrected, for, not being able to see like other children, school and books are neglected, and if unrestrained it seeks amusement, often in environments not conducive to its moral requirements. For this reason a strict examination of the eyes of all children should be made where there is the least misgiving that there is a defect in the vision. School boards in various parts of the country are doing much to augment this matter and should receive the encouragement of the public.

The symptoms usually attributed to eye strain are so numerous, so varied, so complex and so diffused that were I asked which were the most significant, the answer might well be, *Which* are not?

So far as I know there has been no particular classification of the abnormal concurring conditions which appear with efforts of the accommodation of the eye, that serve definitely to point out their seat. It may be well for us to realize that a great many conditions attributed to eye strain come from other causes, for the functions of the eye may be in a perfectly normal condition, as far as its refraction and accommodation are concerned, yet because of affections of the organs whose nervous connections with the eye are direct or acute, functional efforts of the organ of vision can not be performed without precipitating reflex disturbances of some character or other. In this connection, I would say that I have in my experience often met with cases where no refractive error whatever could be detected, where an effort to read or to perform some work calling for the act of accommodation, would invariably precipitate some annoying neurotic condition. Such cases can

not be corrected with lenses, but require the services, conjointly, of the skilled oculist and physician.

Some of the most prominent recognized symptoms of eye-strain are headache, supraorbital neuralgia, dizziness, chorea, nausea, and insomnia. Sometimes a symptom alights far from the eye.

Some years ago I had under my care a young man who occasionally suffered from lumbago, which was always immediately relieved by the instillation of a mydriatic in each eye. Occasionally we meet with cases of severe pain within the eye, as ophthalmodynia, which, in most cases, is due to cramp or spasm of the ciliary muscle. Relaxation with a mydriatic generally relieves it at once.

Although eye strain from defective refraction of the eye is a frequent cause of this condition, it may be brought about by overwork in the normal eye. Eye strain often is the cause of the symptoms enumerated, and I believe that fully seventy-five per cent of the headaches are due to it.

Fully one-half of the cases of eye strain are due to improperly-fitted glasses. The majority of the people wearing glasses are fitted by so-called refractionists or opticians who know practically nothing of optics or defective eyes. The most severe cases of eye strain are in patients who have little perceptible defect in their refraction, but the constant effort to do near and difficult work causes the obscure nervous conditions. To detect these obscure refractive errors lies within the province of the thoroughly skilled, well-equipped oculists.

American Savings Bank Building.

[Written for the MEDICAL BRIEF.]

The Action of Iron.

BY ELI H. LONG, M. D.,

Professor of Therapeutics, University of Buffalo.
Buffalo, N. Y.

While the more recent experiments and observations in the use of iron have enriched our experience, we can not say that much progress has been made in our knowledge of the precise behavior of this metal in the treatment of chlorosis. The text-book statements of twenty-five years ago regarding the absorption of the inorganic forms of iron, and the therapeutic results of their use, will answer for today with slight modifications. The opinion expressed in 1884 by Bunge to the effect that inorganic iron is not absorbed, but acts simply as a protective to the food iron by uniting with hydrogen sulphide in the intestine, thus saving the food iron from similar combination, leaving it free from absorption, seemed reasonable, and it has had quite an influence in our conception of the action of this metal.

Nevertheless, we can say today that this view has been fully disproved, the proof resting upon two points:

1. The absence of hydrogen sulphide, as a rule, in the small intestine where the absorption of iron is most active, and (2) the experimental work of recent years of Hochhaus, Quincke, Macallum, Honigmann and others, furnishes accumulated evidence that the inorganic forms of iron are freely absorbed from the digestive tract. It seems probable that, whatever form or salt of iron is employed, it is absorbed either as a chloride or an albuminate, chiefly from the duodenum, whence it is deposited in loose combination, chiefly in the liver and spleen, and changed as needed into hematin or hemoglobin or other tissue iron.

Regarding its value in chlorosis there can be no possible question, but it is difficult to understand why the system utilizes the inorganic forms of iron administered, when it seems unable to appropriate the organic forms in which it exists in the food; for chlorotics, as a rule, take foods which are reasonably rich in iron. The question arises whether the inorganic forms are not more easily assimilated. The clinical facts seem to favor this belief. This is not saying that organic forms of iron have no value, because their administration is usually followed by some improvement; but the reported results of several clinicians indicate that the organic forms of iron used today are on the whole inferior to the older inorganic forms, particularly reduced iron, tincture of the chloride and Blaud's pill.

1335 Main Street.

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J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
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ST. LOUIS, MO.
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FOREIGN OFFICE:
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[Written for the MEDICAL BRIEF.]

Frontal Band Alopecia or "High Forehead" as a Sign of Graves' Disease and of a Predisposition to Various Vasomotor Troubles of an Apparently Allied Nature.

BY DAVID WALSH, M. D. (EDIN.),
Senior Physician Western Skin Hospital, London; Physician Kensington General Hospital. London, England.

In the title of this article the term Graves' disease has been used in preference to the more familiar name of exophthalmic goitre. The latter name is now generally held to be the less appropriate, inasmuch as it refers to a single sign only in a manifold group, and one that is often conspicuous by its late occurrence or even by its complete abeyance. Amongst British writers the name of Graves has become most generally associated with the disease in question. That distinguished physician described the malady in 1835, and Basedow followed him in 1840, but there is much to be said for the claim of Parry, of Bath, who, in 1825, described eight cases of enlargement of the thyroid gland, in connection with enlargement and palpitation of the heart.

There is no need here to describe in detail the signs and symptoms of Graves' disease. All medical men are, of course, familiar with the symptom—complex picture made up in the early stages chiefly, of tachycardia, tremors, headache, palpitation, exophthalmos, and enlargement of the thyroid gland. To this list it seems not altogether unlikely we may now add a new sign, of extremely common if not of invariable constancy, in the shape of a frontal band alopecia, which is, so far as I have been able to ascertain, usually of congenital origin. As a further observation, after examining a number of persons having a congenital frontal area of practical or complete baldness, I find it invariably associated with one or more of the symptoms that are met with in Graves' disease. In some of these patients the condition or predisposition has actually merged into actual Graves' disease. I therefore am inclined to look upon patients having a congenital frontal bald or semi-bald band area as persons predisposed to the development of Graves' disease, or as being, in other words, the subject of what I have ventured to speak of as "potential" Graves' disease.

The term, frontal band alopecia, is used here to include an area of partial or complete baldness, extending over the frontal margin of the scalp to a breadth of about half an inch or an inch. At each outer end of this frontal band two extensions, or bays, run backwards into the scalp. This frontal band, as already stated, may be hairless, it may be indicated by a narrow pencil of short hairs indicating where, under usual conditions, the anterior margin of the scalp would have reached; or, lastly, it may be covered with a sparse

growth of hair on one or both sides. Where this sparse growth consists of long hairs it is always possible to detect the presence of a frontal band alopecia area by its relative thinness of growth compared with that of the neighboring scalp. This frontal band alopecia is congenital, and its margin, on the scalp side, is less sharply defined than that of the acquired band alopecia, the margin of which is sharp, as though the hair had been shaved off with a razor. In some of my cases it looked as if the acquired sharp edge had been superseded to the congenital form. Where the congenital band alopecia is complicated with ordinary seborrheic baldness it is in some cases difficult or impossible to recognize the existence of the congenital form.

Frontal band alopecia, as a matter of fact, corresponds with the state of affairs known in ordinary life as a "high forehead." The congenital form may, as a rule, be identified by asking whether the patient always had a high forehead. In some cases, more especially in females, the existence of the frontal area is shown by the central projecting point of hairy scalp, which is often called the "widow's peak." If my observation be correct, the high forehead, or frontal band alopecia, is likely in the future to have an important place in diagnosis, both as a sign of Graves' disease, and, possibly, of more importance, as pointing to a special predisposition towards Graves' disease, and towards a large class of associated vasomotor disturbances, such as epistaxis, some forms of headache, Raynaud's disease, urticaria, chilblains, and other more or less remote symptomatic phenomena.

The starting point of this series of observations began in the noting of a frontal band alopecia in a child brought to the hospital out-patient department. The area of baldness, from its appearance, was clearly congenital, and inquiry of the mother confirmed the fact that the forehead had always been "high." A little further investigation showed that the "high forehead" was an extremely common condition, both among children and among adults, and that it was often hereditary. The clew this afforded led to interesting results, and was pursued with the liveliest interest, inasmuch as the origin of many forms of alopecia, and, above all, that kind known as band alopecia, has been hitherto wrapped in profound mystery.

The occurrence of the congenital frontal band alopecia in several cases of Graves' disease, suggested a more detailed examination of the thyroid gland in children with "high foreheads." It soon became evident that the condition of high forehead was not only extremely common, but was, moreover, associated with a series of well-marked signs and symptoms. In general appearance the children were, as a rule, of quick, neurotic type, often highly nervous or timid, and sometimes tremulous; their hands were frequently red or dusky, and cold to the touch, and they suffered from the cold; the pulse was quick; the thyroid, in many cases, showed a moderate enlargement, and the eyeballs were occasionally prominent. The friends often give a history of "nervousness." On inquiry, other members of the family are often found to be nervous and tremulous, with high foreheads and large throats—sometimes the frontal band alopecia and the large thyroid were to be seen in the mother. The frontal band was far more common in girls than in boys, and in this and other ways suggested that there was some relation between its accompanying phenomena and those of Graves' disease.

The idea thus suggested was strengthened by the appearance at hospital of a patient suffering from Graves' disease. She was one of four sisters, all single and all presenting a remarkable family likeness, and all having come to the hospital on account of falling hair. The patient, A. M., aged thirty-six, came to the hospital in November, 1906, with well-marked fine tremors of hands, moderate exophthalmos, slight thyroid enlargement, and a pulse of one hundred and twenty. The condition of Graves' disease, thus plainly indicated, was noted for the first time in 1906, although the patient had been under treatment, at intervals, since September, 1898. On first coming under observation there was certainly no Graves' disease, but she complained of several patches of baldness, one the size *of a palm*. Under appropriate treatment the hair grew over all the bald patches with the exception of

one small area which first appeared at the age of twenty, and which has never since been covered. The patient had suffered from one attack of rheumatic fever, but the general health was fairly good.

Now, on examination, this patient was found to have a congenital frontal band alopecia. There appeared to be some grounds, therefore, for surmising that a potential condition of Graves' disease had been by some determining influence developed into the fully-fledged malady. No history of fright, shock or other depressing condition was forthcoming. At the very time, fortunately, three other sisters were under treatment for falling hair or bald patches.

The family history was fairly good. Father and mother living; mother had a bald patch on head at twenty years of age, and it is still bald. Two of the sisters have had rheumatic fever. There are two brothers; in one, aged thirty-eight years, the hair is receding from the forehead, but not from that of the other, aged twenty years. All four sisters are nervous, all have quick pulse and tremors, all have frontal band alopecia (in one there is a superadded acquired band, shown by its clear-cut edge), all have more or less enlargement of the thyroid gland. All have had patches of baldness, except one who had an extension of the frontal band alopecia behind the left ear.

E. M., thirty years (one of the four sisters), showed fullness over the thyroid gland. She could not tolerate any pressure, however slight, upon the isthmus. She had always suffered from headaches, usually temporal, but sometimes vertical or occipital. There was moderate exophthalmos, but no "tardy lid." Patient never wears a collar (a common sign of thyroid enlargement or undue sensitiveness). Pulse one hundred and thirty-two; very nervous; well-marked frontal band alopecia.

M. M., aged thirty-four years (another sister), had a frontal band alopecia and a small rounded patch in front and above left ear. Pulse ninety-two; very nervous and irritable, constant frontal headaches, hands white, "dead" at times lately, and suffers from chilblains in winter, thyroid full, lobes enlarged, isthmus extremely sensitive to pressure, and also upper part of lobes. Never wears a collar.

An examination of thirteen cases of Graves' disease showed the constant presence of a frontal band alopecia, which, from its appearance, appeared to be congenital. In some cases the congenital nature was confirmed from the history of a "high forehead" since birth. The constancy of this symptom in this comparatively small group can not, of course, be taken as conclusive. It is an association, however, sufficiently striking to place on record as a stimulous to independent observation on the part of others.

A great deal more might be added of interest as regards the investigation of this congenital sign, of which I have, so far, been unable to find any mention in medical literature; that is to say, in its relation to the signs and symptoms of Graves' disease. The association of patch and universal baldness in myxodema has, of course, been frequently noted. In three cases of myxodema under my own observation, I have found the frontal band alopecia. In all three there were clear signs of existing or pre-existing Graves' disease. In another case of myxodema in a woman, aged sixty-one, there was no frontal band alopecia, neither were there any traces of Graves' disease.

The congenital frontal band alopecia may be present in children who may possess none of the signs and symptoms that I have commonly found in another. A careful examination, however, will often reveal nervousness or a history of epistaxis, or some of the associated phenomena in other members of the family. Assuming, for the purpose of argument, that there is any constant association between the congenital high forehead and the Graves' phenomena, it does not follow that there may be more than one or two present, or that the whole group may be latent. We know that in Graves' it is common to meet with cases in which one or more of the classical signs and symptoms are wanting.

The possible origin of the congenital frontal band alopecia opens up an interesting field of speculation and research. It would be premature, at present, to venture into this part of the subject. At the same time it may be permissible to hint

that the sign is possibly or probably of vasomotor origin. In this connection it is interesting to note that in the series of seventy-two cases of frontal band alopecia, upon which this preliminary note is based, thyroid enlargement has been noted in forty-two, myxodema in four, urticaria factitia in one, Raynaud's disease in two (and a probable history of same in another). In a fair proportion there was a family or personal history of tubercle or syphilis.

The effect of appropriate electrical treatment upon Graves' Disease, if taken at an early or moderately early stage, is striking. Carden published an article on the subject in 1891.* My attention was first drawn to the point some little time ago by my friend, Dr. Arthur Harries, who tells me that, in many instances, cure is not only rapid, but complete and permanent. This I have been able to confirm in several instances, at any rate so far as the immediate cure is concerned. After one application of the battery the patient's nervousness will often disappear as if by magic, the pulse falls considerably, exophthalmos lessens, and the patient experiences great relief. In short, the only treatment I have personally found at all satisfactory in Graves' disease or exophthalmic goitre, is that of the electrical current. When applied for the relief of the nervousness and other phenomena of the condition I have called potential Graves' disease, the results are no less striking and satisfactory. Incidentally the hair may sometimes be induced to grow by the indirect application of the current in the local treatment of the thyroid gland.

The key to a number of more or less remote and obscure vasomotor troubles may, in my opinion, be sometimes found in the frontal band alopecia. When this is the case I have found that a reasonable prospect of relief is afforded by the use of appropriate electrical treatment.

This sign—congenital frontal band alopecia—may or may not ultimately prove to have the clinical and pathological significance which I am inclined to attach to it. Of this, however, I feel confident, if the physician who is called upon to investigate the case of a patient suffering from "nervousness" or from hand tremors, due to no obvious reason, he will do well to look at the forehead for this sign.

FIG. 1.

Conversely, if he find the sign, he will do well to look for the associated phenomena of Graves' disease, and he may, in this way, secure valuable hints in arriving at his diagnosis, and in drawing up a plan of treatment.

Incidentally, a large number of interesting problems are suggested. For instance, one man gets a terrible physical or mental shock and survives with nerves unshaken. Another is faced with a similar experience and develops Graves' disease, epilepsy or insanity. May not the latter have a vulnerable constitution, of which the outward and visible sign is a congenital frontal band alopecia? If my surmise be not altogether unfounded, the high forehead is the more or less constant signal of an inherited instability of the vasomotor system.

The high forehead from birth appears to be, as already stated, an extremely common condition. If that be so, and if it can not be potential Graves' disease, then the latter must be far commoner than is generally supposed. From my experience of the frequency of the phenomena of Graves' disease in association

* *Lancet*, July 1, 1891.

with frontal band alopecia, and from the discovery of cases by following up frontal bands, I am inclined to think that mild cases of Graves' disease are often overlooked in medical practice.

In this brief preliminary note it has been out of the question to mention the migraine, the loss of voice, the depression, dyspepsia, diarrhea, vertigo, vomiting, menorrhagia, and many other symptomatic troubles attributed to hypo-thyroidism.

In a great number I have found the "high forehead" as an associate sign. Irritability of temper is commonly found in the class of patients thus denoted. When a person gets angry and hurt for some trifling and inadequate cause and then is unable to eat, so far as my investigations extend at present, that person will be found to have a congenital frontal band alopecia.

The accompanying photograph (Fig. 1) shows L. M., a girl nine years of age, who came to the hospital complaining of a small patch of alopecia on the crown. She

FIG. 2.

was found to have a well-marked congenital frontal band alopecia, of the frontal kind, covered with a thin, sparse growth of hair. The thyroid gland shows marked enlargement in both lobes, pulse one hundred, hands shake sometimes. This is the sort of patient that, later, under the influence of shock, worry and depressing conditions of environment, would be likely to develop Graves' disease.

The second illustration is one of Graves' disease in a patient who has had a frontal band alopecia from infancy. Y. T., thirty-one, married, four children (the eldest suffers from nervousness and tremors; history of fright by a mouse). Patient complains of nervousness and tremors. Eyes prominent, ring of cornea visible and von Gruepe's sign present. Pulse, one hundred. History of shock some years previously. Epigastric throbbing and moderate enlargement of thyroid gland. Family history fairly good, except that mother died of cancer at forty-nine years of age. Patient has always been in pretty good health, with the exception of headaches and nervousness. Had a severe flooding (ten weeks) after birth of last child. The throat diminished in size and symptoms disappeared rapidly under electrical treatment.

The above patient brought two of her children to the hospital—Daisy T., aged eleven years, had a well-marked congenital frontal band alopecia, deeply pigmented skin, and enlargement of thyroid gland, especially in isthmus, which was lobular. No tremors. Pulse, eighty-nine.

George T., aged seven years, has well-marked congenital frontal band alopecia and a palpable thyroid gland, especially the left lobe. Not a nervous boy, but one of the two remaining children is nervous.

[Written for the MEDICAL BRIEF.]

Notes on Neuralgia.

BY ANGUS CAITHNESS, M. A., M. D.,
Glasgow, Scotland.

I have read Dr. Lennane's article on "Neuralgia and its Treatment," in the June number of THE MEDICAL BRIEF, with much interest. It is suggestive, and above all, it contains prescriptions, which are always of value to the busy physician. My interest in the subject arises from the fact that I have been a sufferer from intermittent right supra-orbital neuralgia for many years. This variety is never syphilitic in origin; often, however, it is

due to an old malarial infection, and I have no doubt that such is the case with me. I know of one or two remedies which, apparently, afford relief in the sense that they modify or cut short the attack, and I have a long list of drugs which have utterly failed. For many years I have kept myself well-posted in the literature of the subject, and I must confess that I am, to a very large extent, a believer in and a follower of the late Dr. Francis E. Anstie. He was a well-known London physician, and died, if I mistake not, in 1874, from septicemia, the result of a *post-mortem* wound. He contributed to medical literature various articles on the subject, some of which appeared in an early volume of *Reynold's System of Medicine.* The disease is difficult of definition, but his short description of it adequately serves the purpose. He says:

Neuralgia may be defined as a disease of the nervous system, manifesting itself by pains, which, in the great majority of cases, are unilateral, and which appear to follow accurately the course of particular nerves, and ramify, sometimes into a few, sometimes into all, the terminal branches of those nerves. These pains are usually sudden in their onset, and of a darting, stabbing, boring or burning character; they are, at first, unattended with any local change, or any general febrile excitement. They are always markedly intermittent, at any rate, at first; the intermissions are sometimes regular and sometimes irregular, the attacks commonly go on increasing in severity on each successive occasion. The intermissions are distinguished by complete, or almost complete, freedom from suffering, and in recent cases the patient appears to be quite well at these times; except that for some short time after the attack the parts through which the painful nerves ramify remain sore, and tender to the touch. In old-standing cases, however, persistent tenderness and other signs of local mischief are apt to be developed in the tissues around the peripheral twigs. Severe neuralgias are usually complicated with secondary affections of other nerves which are intimately connected with those that are the original seat of pain; and in this way congestion of blood vessels, hypersecretion or arrested secretion from glands, inflammation and ulceration of tissues are sometimes brought about.

The classification of neuralgias is difficult, but roughly they may be arranged in groups (1) according to their causation or constitutional condition of the patient, and (2) according to the nerves affected and their anatomical distribution. Neuralgia may be traumatic in origin, or it may be due to some constitutional state, such as syphilis, malaria, saturnism, gout, the poison of rheumatism or the various forms of anemia. It is convenient for the moment to exclude those neuralgic pains due to gross anatomical lesions, such as posterior sclerosis and cerebral tumor. It is also necessary to exclude cases of neuritis which, although closely allied to neuralgia, present distinctive differences. Amongst the commonest varieties of neuralgia regarded from the distribution point of view, are (1) the supra-orbital, (2) the trifacial, commonly known as tic douloureux, (3) the cervico-occipital involving the first four cervical nerves, especially the infra-orbital, (4) the cervico-brachial, and (5) the intercostal.

Anstie, however, recognizes many sub-varieties, notably those which are peculiar to different periods of life. The neuralgias of the middle period of life present some peculiarities. By this period is meant the time included between the twenty-fifth and about the fortieth or forty-fifth year. It is the time of life during which the individual is subjected to the most serious pressure from external influences. The men, if poor, are engaged in the absorbing struggle for existence, and for the maintenance of their families; or, if rich and idle, are immersed in dissipation, or haunted by the mental disgust which is generated by ennui. The women are going through the exhausting process of child-bearing, and supporting the numerous cares of a poor household; or are devoured with anxiety for a certain position in fashionable society for themselves and their children; or, again, they are idle and heart-weary, or condemned to an unnatural celibacy. Very often they are both idle and anxious.

The neuralgia of declining bodily vigor or commencing senility are equally char-

acteristic. The period referred to is that which commences with the first indications of general physical decay, of which the earliest which we can recognize (in persons who are not cut off by special diseases), is, perhaps, the tendency to atheromatous change in the arteries. The first development of this change varies very considerably in date; but whenever it occurs it is a plain warning that a new set of vital conditions has arisen, and, especially notable is its connection with the characters of the neuralgic affections which take their rise after its commencement. The period of declining life is preeminently the time for severe and intractable neuralgias. Comparatively few patients are ever permanently cured who are first attacked with neuralgia after they have entered upon what may be termed the "degenerative" period of existence. The existence of commencing arterial degeneration is the special and most trustworthy sign of the initiation of bodily decay; but this change is often not to be detected in its earliest stage. Something has been done of late, however, to render its diagnosis more easy. Not to dwell upon the phenomenon of the *arcus senilis*, which, though of a certain value, is confessedly only very partially reliable, we may mention the sphygmographic character of the pulse as possessing a real value in deciding the physiological status of the arterial system. There is a well-known form of pulse-curve, square-headed, with marked lengthening of the first or systolic portion of the wave, and with an almost total absence of dicrotism, even when the circulation is rapid, which will often seem to assure us that atheromatous change of the arterial system has commenced, even when the physical characters of inelastic artery are not to be recognized in any of the superficial vessels by the touch of the finger. Indeed, the latter test is, in all cases, far less reliable than the sphygmographic trace, except when the arterial change has proceeded to a very marked degree of development.

To a certain extent the presence or absence of gray hair is of value in deciding whether physiological degeneration has begun. Like the *arcus senilis*, however, this is only reliable when joined with other indications, for it may be a purely local and separate change, having nothing to do with the general vital status of the body. It is not necessary to describe the ordinary symptoms of neuralgia, as this is a subject with which every physician is sufficiently familiar, but I may briefly mention some of the secondary affections which follow in the wake of the disease, especially when of long-standing. The commonest of these is vasomotor paralysis. It is doubtful if neuralgia ever reaches more than a very slight degree without involving more or less of this; for the so-called *points douloureux* are themselves pretty certainly, for the most part, a phenomenon of vasomotor palsy; and the more widely diffused soreness, such as remains in the scalp, for instance, after attacks of pain, even at an earlier stage of trigeminal neuralgia than that in which permanently tender points are formed, are probably entirely due to a temporary skin-congestion. The phenomenon presents itself in a much more striking way in the condition of the conjunctiva seen in intense attacks of neuralgia affecting the ocular and peri-ocular branches of the fifth; indeed, the whole conjunctiva is often deeply crimson. Again a more than usually violent attack of sciatic pain is often followed by the development of a pale, rosy blush over the thinner parts of the skin of the leg, especially of the calf. Not merely the circulation, however, but the nutrition of tissues becomes positively affected in a considerable number of cases. It is difficult to judge, with any exactness, in what proportion of neuralgic cases this occurs, but its slighter degrees must be very common. Probably the change is, more usually than not, sub-inflammatory, but it is certain, on the other hand, that there are great variations in the kind of tissue changes complicating neuralgia and that inflammation is no necessary element in them. The hair has changed in color, in many cases. The amount varies from mere patches to gray near the roots of the hair to decided grayness of the majority of the hairs over the larger part of half the head, nearly to the vertex; but in each case it is a change of color that does not exist on the other side of the head. A remarkable phenomenon is fluctuation of

the color, the grayness notably increasing during and for some time after an acute attack of pain, and the same hairs returning afterwards more or less to their original color. Changes in the size and texture of the hairs, in neuralgia, has been noted by Romberg and Notta. Occasionally the individual hairs near the distribution of the painful nerve become coarsely hypertrophied; at times the number of hairs appears to multiply, but this is only a case of more rapid and exuberant development of hairs that would otherwise be weak and small. More commonly the effect of neuralgia upon hair is to make it brittle, and to cause it to fall out in considerable quantities. The periosteum of bone and the fibrous fasciæ in the neighborhood of the painful points of neuralgic nerves not unfrequently take on a condition of sub-acute inflammation, with marked thickening and tenderness on pressure.

A very important point to be noted in connection with the sub-inflammatory swellings of neuralgia is that pressure on them will frequently not merely excite the neuralgic pains in the branches of the affected nerve, but send a powerful reflex influence through the cord to distant organs, causing vomiting, for instance, or affecting the action of the heart in a very perceptible manner. The nutrition of the skin over neuralgic nerves is sometimes notably affected, even when the process does not reach the truly inflammatory stage. The mucous membranes, in situations where we can observe them, not unfrequently show interesting changes, the nutrition of the epithelium of parts covering the painful nerve being exaggerated. It has been noted by various observers, in neuralgia affecting the second and third divisions of the trigeminus, that the half of the tongue corresponding to the painful nerve was covered with a dense fur. This is by no means universally the case. The most familiar of the inflammatory complications of neuralgia is herpes zoster, the favorite seat of which is the skin which covers one or more of the intercostal spaces; the eruption, as occurring in this situation, is so well-known that it would be a waste of time to describe it. In young subjects zoster is commonly painless, at least the sensations are those of heat, pricking and irritation, rather than of acute pain; but from puberty onward there is an increasing tendency, especially in those otherwise predisposed to neuralgia, for zoster to be preceded, accompanied or followed by neuralgia of the intercostal nerves corresponding to the distribution of the eruption. Most commonly, the eruptive period is nearly or quite free from neuralgia, but it often recurs, or breaks out for the first time, when the vesicles are drying up, but more especially if, as is sometimes the case, especially in elderly people, the scabs fall off and leave superficial ulcers. Neuralgia may last, after herpes zoster, for any time from a few days to many weeks. In spite of sundry objections that have been raised to the theory of the nervous origin of zoster, the evidence in favor of it is overwhelming, especially now that it is proved that the disease, with all the same characteristics presented by it when seen on the chest or abdomen, may occur on the face (following the branches of the trigeminus), or on the forearm (following the course of nerves from the brachial plexus). A more formidable occasional complication of neuralgia is inflammation affecting the eye. Jonathan Hutchinson records several cases in which neuralgic herpes zoster of the face was attended with iritis, with serious or even irremediable damage to the organ.

As the object of this paper is practical, rather than theoretical, I will indicate certain modes of treatment I have found useful, although at the risk of repeating the recommendations of previous writers. For supra-orbital neuralgia the best internal remedy is quinine, but to do good it must be given in considerable doses, for example, from thirty to forty grains of the sulphate every six hours during the attack. Of local applications many do good, and I have obtained benefit and relief from aconitine ointment, menthol, thymol, chloral, camphor, belladonna, capsicum, and various combinations of these in solution. The essential oils, such as oil of cajeput, oil of cinnamon, oil of rosemary, oil of cloves, and others which might be mentioned, are distinctly efficacious. A useful local application is the linimentum aconiti compositum, composed of equal parts of the liniments of

aconite, belladonna and chloroform. It must be used with caution, for aconite is an active remedy. Menthol paint, made by dissolving one part of menthol in four of olive oil, often affords relief, and the same may be said of unguentum conii, which consists of conium juice, four ounces, with one and one-half ounces of hydrous wool fat. Cocaine vaseline made by dissolving eight grains of cocaine in an ounce of soft white paraffin, may also be mentioned. When the neuralgia attacks the peripheral nerves counter-irritation is indicated, and this may be applied in the form of some preparation of cantharides which may fall short of actual blistering, mustard, cajeput or hot fomentations. The application of ether, ethylic chloride, chloroform, and various agents of this class, have a distinct sphere of usefulness. Anstie, dwelling on this point, has shown that the external remedies which may be applied for the treatment of neuralgia may be divided into (*a*) skin stimulants, (*b*) paralysers of peripheral sensory nerves, (*c*) remedies adapted to diminish local congestion, (*d*) remedies adapted to diminish arterial pulsation, (*e*) electricity, (*f*) mechanical means of protection.

Among the skin stimulants blisters hold the highest place as a remedy for neuralgia; the assertion of Valleix that they are the best of all remedies, is still not very wide of the truth. They are by no means universally applicable, and the degree to which their action should be carried varies materially in different forms of the disease, but they are of the greatest service in a large number of instances. It is possible to view the action of blisters in neuralgia in more than one way. When applied in such a manner as to vesicate decidedly, and especially if kept open and suppurating for some time they cause considerable pain of a different kind from that of the neuralgia itself, and the mental effect of this, operating as a diversion of the patient's thoughts from his original trouble, may be to assist in breaking the chain of nervous actions by which he is made to feel neuralgic pain.

Another action of blisters which some authors hold to be, perhaps, the most effective portion of their agency, is that which is produced by the drain of fluid, especially when they are kept open, by which means a kind of depletion is set up, and the morbid irritation that causes the nerve-pain removed.

The view which alone explains the beneficial action of blisters, is that which supposes them to act as true stimulants of nerve function. In order that this effect shall be produced, it will be necessary that the skin irritation be either produced at some distance from the seat of the greatest pain, or that, if applied in that spot, it shall be comparatively mild in degree. This object is accomplished by placing the blister as close as may be to the intervertebral foramen from which the painful nerve issues; the effect of this is probably a stimulation of the superficial posterior branches, which is carried inwards to the central nucleus of the nerve.

There are curious differences between the effects of blistering in trigeminal or intercostal neuralgia and in sciatica. It would appear that blistering in the neighborhood of the spine is less frequently effective in the latter, and we sometimes, after failing with this method, obtain immediate success by two or three repetitions of the flying blister, somewhere over the trunk of the nerve, especially just outside the sciatic notch.

It must be said of blistering that it is a remedy not well fitted to be applied to aged subjects; and in its severer forms it should never be applied to patients who are greatly prostrated in strength. For it must be borne in mind that the remedy may miss its aim of relieving the neuralgia, in which case it is necessary to remember, more accurately than many practitioners appear to do, what a very serious element of misery and prostration will be introduced into the case by the vesication itself.

Of the remedies for neuralgia intended for internal administration, quinine is certainly the most generally useful, but I can also speak highly of gelsemium, butyl-chloral-hydrate, chloride of ammonium, and of arsenic. Of the coal tar group my experience has been less favorable, and I think they are better adapted for sick headache of the migrainous type than for actual nerve pain. Guarana and

citrate of caffeine, during the height of a paroxysm, will occasionally afford relief. Nitro-glycerin, in many cases, acts with admirable promptness.

It may be noted that Albert Robin, in a recent article in the *Bulletin gén de Therapeutique*, recommends a mixture of pyramidon, exalgine and Dover's powder. He also uses a syrup having the following somewhat complex composition:

℞ Pyramedon	1½	drachms.
Ammon. Brom.	3	drachms.
Ammon. Iodidi	3	drachms.
Spartein Sulph.	3	grains.
Cocaine Hydroch.	3	grains.
Caffein Valerian	15	grains.
Syrup Aurantii	6	ounces.

M. Sig.: One-half ounce t. d. s.

These complicated prescriptions are not, as a rule, to be recommended, and this is certainly a curious example of poly-pharmacy.

Robin also recommends the following pill, which is comparatively simple:

℞ Ext. Stramonii	1/6	grain.
Ext. Belladoni	1/6	grain.
Ext. Hyoscyami	1/6	grain.

M. Sig.: Ft. pil. One to be taken in the evening and the other at bedtime.

It may be pointed out that the objection to this prescription is that belladonna, hyoscyamus and stramonium have practically the same action.

In many cases of neuralgia the benefit of accessory measures such as attention to diet, clothing, exercise and mental occupation, can not be overlooked. With regard to diet, a plentiful allowance of meat, fish and vegetables is indicated, for in a large proportion of cases, the neuralgic patient is underfed, and consequently anemic. When the body weight is below the normal, fatty food is useful, and this may be supplied in the form of cod-liver oil, glucose, sugar, extract of malt, and, above all, milk, butter and cream. Neuralgic patients are susceptible to the action of cold, and especially of draughts, and both winter and summer they should wear woolen clothing next to the skin. It is better that they should be kept warm by appropriate underclothing rather than by a heavy overcoat, which hampers their movements and prevents them from taking active exercise. I always advise neuralgic people to take a brisk walk, preferably in the early morning, even before breakfast. It improves the appetite and stimulates the circulation. The mind, too, must be occupied, for the indolent are apt to dwell on their pains and physical discomforts. Bright sunlight is a powerful therapeutical agent, and both bedroom and sitting-room should face the sun. A heavy clay soil is bad for all neuralgics, and the house should be dry, and on a sandy or gravel soil. The desideratum for all neuralgic affections is perpetual summer, but this can only be obtained, and it is not always possible, by an annual migration. A bracing air, with a fairly high altitude, is good, but to this rule there are exceptions, for many chronic cases do best, and are freer from pain, in a moist, warm and even relaxing climate.

From this it will be seen that the treatment of neuralgia is a somewhat complex problem, and that many factors have to be taken into consideration.

[Written for the MEDICAL BRIEF.]

An Investigation Into the Modes of Action of the Group of Antiseptics.

BY C. D. F. PHILLIPS, M. D., LL. D. (EDIN.); LL. D. (ABERDEEN); F. R. S. ED., M. R. C. P. (LONDON.)

Late Lecturer on Materia Medica at the Westminster Hospital, London, and Examiner in the Universities of Aberdeen. Glasgow and Edinburgh. London, England.

I.

In this paper it is not proposed to deal with the relative value of different antiseptics, a subject on which there must of necessity be much difference of opinion, but to discuss generally the mode of action of a well recognized group of therapeutical agents.

The etiology of disease having been practically revolutionized during the last few decades by the rapid advances made in pathological research by Koch, Pasteur and others, and the "germ theory" having been established as the true explanation, not only of putrefactive or septic changes, but also of many specific forms of disease —these two facts have naturally directed therapeutists to look for assistance in the treatment of such morbid conditions by

means of the remedies known as antiseptics or germicides.

This large group embraces all those chemical and physical agents which can exert a detrimental or deterrent effect upon the growth and development of micro-organisms, and can bring about their ultimate disintegration.

The value of many of the antiseptics has for long, been recognized, and although their employment has been entirely empirical, their efficacy has been none the less marked or appreciated. Recently, however, large additions have been made to our knowledge of the more special characteristics of this extensive class, and since fresh methods of observation have been introduced and elaborated, more exact researches have been conducted with the view of throwing fresh light upon the manner in which these substances effect their germicide action.

Our knowledge construing them is as yet vague and fragmentary, and the therapeutist, in directing his attention to their study, is met at the commencement by a series of important problems which it will be necessary here shortly to discuss under the following heads:

1. What is known regarding the biological history of microbe or micro-organisms as a class.

2. What is known regarding the action of the microbes upon the tissues as well as upon the great physiological processes of the body itself, whether in a normal or abnormal state.

3. What is known regarding the action of those physical or chemical reagents which are called germicides upon the organisms themselves..

4. What is known regarding the action of germicides whether exhibited externally or internally upon the tissues and functions of the body itself.

1. In considering the first problem, as it presents itself before us here, only a brief review of the ascertained facts can be submitted.

Although numerous and valuable results have been gathered from the careful exertions of many reliable observers (who have devoted much time to the study of the life-history and special characteristics of these micro-organisms, as well as to the differentiation of the individual members of the vast phalanx of which they consist into groups and families)—the difficulties of making a suitable and satisfactory classification are extremely great.

One group of germs (saccharomyces cerevisiæ), are seen to luxuriate, where another (bacillus anthracis) will not be able to show any signs of vital activity, and upon some such peculiarity methods of classification have been adopted.

Pasteur suggested one based upon the necessity (or the reverse) of the presence of oxygen in the surrounding media; and he accordingly divided all germs into two great classes: The ærobic—those which require the presence of oxygen—and the anærobic—those which can flourish without oxygen. For the present purpose, however, such a system of classification is of no value. A more satisfactory basis has been offered by pathologists, who classify germs according to the physiological effects they can produce upon the system of more highly organized beings, into two great divisions, the putrefactive or septic, and the pathogenic or specific.

The latter, the pathogenic, are those that act upon animals so as to produce special forms of disease; they do not flourish in acid media, nor in the absence of proteids and certain inorganic salts; whereas the former exert no specific influence upon the body, and do thrive in acid media, as well as in the absence of proteids. This classification is not quite satisfactory, however, since septic organisms do, in some instances, thrive in alkaline media also, and sometimes vary in their reactions.

For instance, a bacillus supposed to be that of leprosy, although resistant to acids (in staining) when grown in gelatine and bouillon, loses this resistant power when grown on agar-agar.

Certain conditions are now recognized as being essential to such an environment as will allow of the development, growth and multiplication of micro-organisms. Thus they must be situated in a suitable soil, from which the necessary nourishment may be obtained for their subsistence; they must enjoy certain ranges of temperature, and lastly, there must be a certain amount of moisture in the sur-

rounding media. The deprivation of one or all of these conditions, or, in the case of some (as will afterwards be discussed), their presence in excess will arrest the growth and development, or if carried further, bring about the degeneration, and ultimately the complete disintegration of the organisms themselves.

Their growth and multiplication, when placed in a suitable soil, and under favorable conditions, is extremely rapid, and the media soon become teeming with the microbes, but it is an interesting fact to observe that there comes a time when, in spite of the favorable conditions for growth, and regardless of the remains of undevoured stores of nourishment, they degenerate and die; they are no longer able to proliferate, and they become not dormant, but extinct.

Wernich, Burdon, Sanderson and others established the fact in regard to putrefactive ferments that certain complex chemical compounds are produced as the result of their vital action; and that these substances, which mostly belong to the aromatic series, have, when produced in sufficient quantity, themselves a powerful deterrent and destructive effect upon the vital activity of the organisms which have produced them, and thus, by their own increased growth and multiplication, their own destruction is brought about. Koch and others have given greater prominence to those products in relation to pathogenic organisms of tubercle and ague, and considerable light has been thrown upon the etiology of these diseases by such observations.

Again, the chemical compounds produced by one species of micro-organism are often baneful in their effects upon those of another species, so that the appearance of one kind of organism in a cultivation of another may keep, during its presence there, the original growth in check, or even destroy it. This peculiar effect is due, in all probability, to the antiseptic action of the ptomaine produced, being more marked upon the *foreign* germ than upon itself, but considerably more information is needed to supplement our knowledge in this important detail.

A fact even more interesting and remarkable is recorded by Brieger and Fraenkel with reference to diphtheritic bacilli, viz., that they produce two substances, one *toxic* to an animal, the other *protective;* the former destructible by a temperature of 55°-60° C.—the latter resisting a temperature little below boiling point. These substances are otherwise closely allied, and possibly one is transformable into the other.

2. The relation between the micro-organisms and the tissues of the body in which they are found affords a very interesting study, and is a necessary factor for consideration.

That germs are found in enormous numbers in the blood and in the tissues of the body in some specific diseases is an indisputable fact, but the exact relation that they bear to each other is not well known.

Virchow has pointed out that there appears to be a perpetual warfare going on between the micro-organisms and the cells of the tissues with which they come in contact. The microbes attack the cells in their immediate neighborhood, and the cells, in their turn, react upon the microbes and cause their disintegration, and thus an antagonistic process is being carried on between the two with a continuous struggle for the ascendancy. The result of this process is the formation of ptomaines similar in character to those already described as formed in pure cultures apart from the body altogether, but differing, apparently, in the case of different organisms.

Thus, where these microbes become situated (and some appear to affect one organ while another group infect another), considerable local irritation is set up with its concomitant processes, but how the great symptomatic changes are brought about which are regarded as indicative of their presence in the system and the precise relationship of the germs to the diseases with which they are associated, is at present not satisfactorily explained.

Several theories have been advanced to afford a possible basis for rational appreciation of their import.

(*a*). Is it that micro-organisms, having once become introduced into the system, find a suitable nidus in the blood and tissues for their development, grow and multiply with such rapidity that they

come to interfere by their *physical* properties with the great physiological functions of the body? or (*b*), Do they, by the vital requirements of such an enormous number, abstract from the tissues and juices of the body those materials which are essential for their growth, and without which, abnormal conditions of so extensive a nature become established? or (*c*), Is it that they are of themselves innocuous, and cause their virulent effect by the chemical metamorphosis over which they preside in the presence of certain complex compounds (but in which they themselves are not influenced), or by some poisonous secretion or excretion emanating from themselves?

This last, the ptomaine hypothesis, in all probability, is the most likely to afford a satisfactory explanation. It is a recognized fact that ptomaines are present wherever there is a manifestation of vital activity by microbes (though how they are formed is not fully appreciated), and, further, other researches have clearly shown the exceedingly toxic nature of their effect upon the general system, since they produce all the effects of severe fever, when introduced into the circulation, even in very small quantities.

3. What is known regarding the action of those physical or chemical reagents which are called germicides upon the organisms themselves?

Concerning the influence of variations of temperature many observations have been made with the result of showing that some kinds of germs, and even different stages of development of the same germs, can resist higher or lower degrees of temperature than others, and in most instances the high degrees of heat are more effective as germicides than the low degrees of cold, for, although the latter do very markedly diminish vital activity, this is only temporary, unless the exposure be prolonged over very considerable periods of time.

External applications of cold have been recommended, in some cases, to diminish the activity of germs in some local affections, but it will readily be seen that, owing to the normal temperature of the body, the application of cold has to be limited to the surface and to localized areas.

The higher degrees of temperature have undoutedly a wider sphere of application, because of both the greater efficacy of their action, and also the greater readiness with which such high temperatures are obtained. Dry heat is not found to be so effectual as heat with moisture, since it appears that this renders the germs more readily affected.

The rise in temperature in cases of fever may be regarded in this connection as a recuperative attempt on the part of nature to hinder the development, and check the further multiplication of the micro-organisms within the system. Koch has clearly shown that a temperature of 105° F. is sufficiently high to check the further development of tubercle bacilli, and that if these bacilli be exposed for three weeks to a temperature of 107° F., they will be killed. He has also found that the bacillus of cholera was prevented from further growth by a temperature of 104° F., and the bacillus of anthrax by one of 109° F.

This elevation of temperature in specific fevers has a close connection with the renewed activity of the colonies of germs within the body, and is generally regarded as due to an increased formation of ptomaines, which, finding their way into the general circulation, react upon the central nervous system, and cause the rise in temperature.

Moreover, the elevation of temperature has a further beneficial action, since the ptomaines produced exert a more deterrent action upon the growth of the microbes in the presence of increased heat. Heat is of great service in sterilizing instruments and purifying air contained in closed vessels, and also solutions which may form suitable nidus for germs, but the high degrees of heat and the prolonged exposure required render its application inconvenient.

In accordance with these experiments, inhalations of hot air, both moist (Krull), and dry (Sormani and de Toma), have been recommended in cases of tubercle in the lung and diphtheria, or the theory that the growth of the microbes will be checked by such temperatures, but it is difficult to follow the arguments advanced by the above named observers, and their conclusions are by no means convincing.

In discussing the large group of chemical substances, the claims of which, to be recognized as germicides, have from time to time been brought prominently forward, it will not be possible to review them at any length, but it is important to understand how they have been tested and how certain conclusions have been reached.

The method of observation first employed to recognize the value and power of an antiseptic was introduced by Koch, and has since been followed by many other observers.

It consists in observing the degree of concentration required for a given substance in order to prevent the development of a particular organism in a suitable nutrient medium.

Active spores of the bacillus anthracis were for that purpose transferred to media to which known quantities of the chemical had been previously added, and the whole placed under favorable conditions for growth. If this growth was hindered, or prevented, the germicide was proved to produce a positive result.

TABLE I.

GROWTH OF ANTHRAX SPORES IN A GELATINE MEDIUM.

Chemical Agent.	Hindered.	Completely Arrested.
Sublimate Solution	1:1,600,000	1:300,000
Oil of Mustard	1: 330,000	1: 55,000
Allyl Alcohol	1: 167,000	1:
Potassium Arsenite	1: 100,000	1:100,000
Thymol	1: 80,000	
Turpentine	1: 75,000	
Hydrocyanic Acid	1: 40,000	1: 8,000
Oil of Peppermint	1: 33,000	
Osmic Acid	1: 6,000	
Oil of Cloves	1: 5,000	
Potash Soap	1: 5,000	1: 1,000
Iodine	1: 5,000	
Salicylic Acid	1: 3,300	1: 1,500
Hydrochloric Acid	1: 2,500	1: 1,700
Camphor	1: 2,500	above 1: 1,250
Eucalyptol	1: 2,500	above 1: 1,000
Borax	1: 2,000	1: 700
Benzoic Acid	1: 2,000	
Potassium Sulphate	1: 2,000	
Bromine	1: 1,500	
Chlorine	1: 1,500	
Potass. Permanganate	1: 1,400	
Boracic Acid	1: 1,250	1: 800
Carbolic Acid	1: 1,250	1: 850
Chloral Hydrate	1: 1,000	1: 400
Quinine	1: 830	1: 625
Calcium Sulphate	1: 350	
Potassium Chloride	1: 350	1:
Sodium Sulphate	1: 250	
Acetic Acid	1: 250	
Sodium Benzoate	1: 200	
Alcohol	1: 100	1: 125
Sodium Chloride	1: 64	

In reviewing these experiments, however valuable, as they indeed are, it must not be concluded that the degree of concentration given is sufficient to produce a complete antiseptic effect. Undoubtedly the growth and further development of the micro-organisms have been prevented for the time being, and although their death *may* have been caused, yet no such conclusion can be arrived at, unless the germs thus exposed to the antiseptic be transplanted into a suitable soil, under conditions favorable for growth if the vitality be not lost.

This method has, accordingly, been modified by Klein and others, who have adopted the plan of first bringing a small quantity of an organism (either in the culture-fluid or upon sterilized silk thread) into contact for a variable time with a relatively large quantity of the chemical agent to be investigated, and then the vitality of the organisms thus treated is tested after various periods of exposure by placing them in a suitable medium and observing if they still possess the power to grow and multiply; and in the case of those organisms which give rise to specific diseases inoculation of suitable animals is made. The advantages of this latter method are obvious, and the accuracy of the results is insured by further cultivation.

[Written for the Medical Brief.]

Uterine Displacements and How to Manage Them.

BY MARCUS ROSENWASSER, M. D.,

Professor of Diseases of Women Cleveland College of Physicians and Surgeons. Cleveland, Ohio.

Uterine displacements are found in at least one-third of the cases that come for gynecological treatment. They do not always constitute the chief disorder, but are frequently subordinate to other conditions; as pelvic inflammation, tumors, lacerations. Upward, lateral and quite a proportion of posterior displacements are due to peritoneal causes, which constitute the real disease; while downward, and many posterior displacements are largely due to lacerations. It would be of interest to consider the causes of the various displacements as directly bearing on their management, but time will not permit,

nor would I presume to exhaust your patience.

Classification and Principles—Pelvic inflammation, hemorrhage into the pelvis and pelvic tumors generally, cause displacements of the womb. These displacements are secondary to the existing condition, hence require no management, as such. Any forced effort to correct such malposition is not only of no benefit, but may be followed by results far worse than the original disease. We must, therefore, draw the line in the treatment of displacements between those primarily constituting a diseased state and those secondary to other concurrent pelvic diseases. The womb, under the latter conditions, is more or less limited in its physiologic movements; it is a *fixed* womb.

The division of uterine displacements into those which are *fixed* and those which are *movable* has, therefore, a practical basis.

When the *movable* womb is displaced, the organ may be otherwise healthy, and the remaining pelvic viscera may be normal. We call this a *single* displacement.

More often the mobile womb is not only displaced, but also either itself diseased, or its supports are relaxed above, or lacerated below; these complications of a displaced, movable womb constitute a *complicated* displacement.

Although *simple* displacement may not at first cause any symptoms, I regard its correction as a necessary prophylactic measure. Torsion of the broad ligament, which carries the vascular and nerve supply to the uterus and its appendages, must, in time, lead to congestion, infection, increase in weight and further displacement, converting a simple displacement into a complicated one.

Excepting prolapsus, all *complicated* displacements can be transformed into simple ones by first performing the operation needed for the removal of the diseased endometrium, for the repair or the removal of the cervix, and the repair of the vaginal tube. When thus converted, they become subject to the same treatment. Prolapsus, or downward displacement in its minor degrees, may be relieved, but can not be cured by mechanical means. To effect a cure, a suspension or fixation operation must supplement the vaginal plastic work. The same is true with procidentia. Operations for the latter so frequently prove ultimate failures, that I exhaust all efforts for relief by mechanical support before resorting to surgery.

The *fixed* uteri are, almost without exception, secondary to conditions that require opening of the peritoneal cavity, and are, therefore, to be treated as problems by themselves, each according to the conditions prevailing in the pelvis. Treatment by massage and tampon, and final support by pessary may be successful in a few isolated cases. Gestation may occasionally effect absorption of adhesions, and result in cure.

Management—In the management of uterine displacements our patients can, therefore, be grouped into three classes, namely: Cases requiring mechanical support only; cases requiring preliminary minor operations, followed by support, and cases requiring a major operation involving a risk to life, or to the integrity of the abdominal wall.

Although I believe one-third of the abdominal operations at present done for uterine displacement are unnecessary, yet I have no quarrel with those who discard mechanical supports and treat every displacement by suspension or by shortening of the round ligaments. I have a personal repugnance to placing life in jeopardy, however slight the risk, when an absolutely safe though slower method may bring about equally good results.

Replacement and mechanical support, aided by minor operations when necessary, constitute my treatment for all mobile displacements. The operation of suspension, or of shortening the round ligaments, is limited to those cases only in which the means mentioned have failed to cure, and to cases complicated by prolapsus. In cases requiring major operative intervention for other causes, shortening or suspension constitute merely complementary aids in the intrapelvic technique.

Method—As a rule the examination is made within the two weeks intervening between the week preceding and the week following the menstrual priod. The bowels have been moved by a cathartic taken the night before, and the rectum flushed

by an enema on the morning of the appointment. The bladder is empty. The patient is placed in the lithotomy position.

After inspection of the vulva the patient is requested to strain forcibly; any relaxation of either vaginal wall is thus revealed; the finger introduced into the vagina discovers the degree of uterine prolapse. The condition and position of the vaginal portion of the cervix are next noted. The position and mobility of the fundus are then determined, and lastly the relative position of the appendages and of any abnormal contents of the pelvis. These examinations may be further controlled and a differential diagnosis facilitated by the rectal touch. Virgins, nervous or fleshy women, or those suffering with chronic peritonitis may require an anesthetic before a diagnosis can be made.

Before deciding upon a course of procedure the previous history, the general health and the condition of other organs outside of the pelvis are carefully considered. Is there any causal relation between the present complaint and the pelvic lesion? May not some other (possibly incurable) disease render treatment of the pelvic trouble practically nugatory? Only when the relative importance of the displacement has been established does its correction become the object of treatment.

Forward displacements of sufficient gravity to require treatment are comparatively rare. I have seen but few cases of anteversion in which the bladder symptoms were relieved by an anteversion pessary. Temporary relief pending other treatment is all that can be expected. The womb is normally in slight anteflexion; only aggravated cases with marked angle between neck and body require attention. Even among cases of this class I select for correction only those which offer more or less obstruction to free drainage of the cavity; this is made evident by the difficulty of sounding and the acute sensitiveness of the canal. Dilatation and curettement give relief for a few months. I have discarded the use of the stem pessary, as it has not been attended by better results. Pregnancy offers the best prospect of cure. Inasmuch as we are consulted by single women for dysmenorrhea, and by young married women for sterility, anteflexion causing both painful menstruation and sterility, my advice to single women is to get married, and to married women who are sterile to try to become pregnant as soon as possible after curettement; otherwise the condition is likely to recur. In the case of a single woman who was not improved by curettage, a permanent cure was effected after tedious and painful treatment by galvanic electricity, using the negative intrauterine electrode. This was eleven years ago at the time of the electric fad. The girl has been recently married; it will be of interest to know whether the caustic effect of the electrode has destroyed the mucous membrane extensively enough to prevent pregnancy.

Anteflexions in which the womb as a whole is displaced backward, so called "*retrodisplaced anteflexion*," better *retracted antereflexion*, are due to shortened sacral ligaments; if not benefited by dilatation or curettage they can be corrected by intrapelvic surgery. *Retracted anteflexion*, as well as *lateroflexion*, limits the physiologic movements of the womb, hence both these conditions are to be managed according to the principles laid down for the treatment of fixed womb.

There are but few *simple posterior* displacements that can not be at least symptomatically cured by reposition and pessary. Reposition is accomplished by bimanual manipulation; when this can not be done, the sound is used as an aid. "It is introduced through the speculum and held in place by the right hand, while the speculum is being removed over it with the left. The left index finger is then placed into the posterior vault, pushing the fundus upward, while the handle of the sound is being depressed. The vaginal finger thus guards against injury and facilitates the replacement." "(*The uterine sound, its use and abuse.*"—*New York Journal Gynecol.*, December, 1893).

"The purpose of the pessary is to elongate the relaxed vagina by lifting the posterior vault, which, in turn, draws back and holds the cervix in its normal position. Made of hard rubber or celluloid, moulded to fit and worn under supervision, it is clean and safe. The pessaries, as manufactured, are too short in

proportion to their width and sharp pelvic curve. More length, less width and more gentle curve are needed. The patient does not realize the presence of a well-fitting pessary in the vagina, and can continue wearing it for years with perfect comfort. It does not interfere with sexual relations, nor with conception; it causes no dystocia. The time required for cure varies from one month to several years. A daily alkaline douche and removal once in three months, or sooner, on complaint, constitute the necessary care and supervision. In case of pregnancy, the pessary is removed between the fourth and fifth months." (*The Mechanical Treatment of Retrodeviations of the Womb.*"—Transact. Am. Association Obst. and Gynecol., 1901).

The *complications of backward displacements* are, usually, alone or combined: endometritis, subinvolution, cervical and perineal lacerations and prolapse of ovaries. Curettage and repair of the various injuries tend to reduce the weight and size of the womb; reposition and support may ultimately restore elasticity of the ligaments, and aid the ovaries in regaining their normal position. It is for this reason that I am opposed to the simultaneous repair of the pelvic floor and shortening of the ligaments or fixation of the uterus by whatever method. I postpone and limit peritoneal invasion to the few cases that do not, in time, improve after the treatment here outlined. But these minor operations supplemented by a support, are not sufficient when descent complicates posterior displacement. There is then no prospect of restoration of the elasticity of the ligaments, and hence no possibility of ultimate cure by pessary. Under these circumstances a simultaneous suspension operation is clearly indicated.

Downward displacements, complicated by descent of the anterior vaginal wall or of the bladder, still furnish a large percentage of failures, despite the variety of ingenious operations devised to cure them. Whenever I can find a Gehring pessary to fit, and to be borne with comfort, I prefer it to operation. It is more difficult to insert than a retroversion pessary, and must be more closely watched. Its fixed points resting against the sides of the pelvis, there is more danger of causing ulceration. Until I have become acquainted with the local effect of this pessary an examination is made once a month. We are still waiting for some one to devise a better method for the cure of *procidentia* than those hitherto known; each of which has been successful in a single case, or in a group of isolated cases, but none of which have been found universally applicable when proved by the test of time.

Now, a final word as to choice of suspension operation. Shortening of the round ligaments by the Alexander method has been advised for simple retroversion only. With hardly an exception I treat this class of cases by mechanical support. Considering the fact that in performing the Alexander operation the round ligaments may be found weak, that there is a greater possibility of wound infection, resulting in failure of the operation and subsequent development of hernia, I formerly did the utero-suspension operation of Kelly. Since the publication by Tod Gilliam of his "round ligament ventro-suspension," I have found his method both theoretically and practically more satisfactory. The operation is done in all cases of movable womb in which mechanical support has been carefully tried and found insufficient, or impractical; also simultaneously with the vaginal operations for descent of the womb, especially previous to the menopause.

The particular method adopted when the womb is *fixed* depends upon the conditions present in the pelvis; whether these consist of adhesions only, or whether there are diseased viscera, or neoplasms. Whenever the broad ligament is left intact, the Gilliam operation is done. When portions of the broad ligament have been excised, the union of the lateral raw surface of the broad ligament to the corresponding surfaces at the sides of the womb will hold the womb forward without disturbing the round ligaments. When the womb has been amputated, the stumps of the broad ligament are united with the stump of the uterus, thus lifting the vaginal vault to and securing it at a higher level.

456 Lennox Building.

[Written for the MEDICAL BRIEF.]

Electricity as a Remedial Agent.

BY J. H. STUART, A. M., M. D.,

Professor of Electro-Therapeutics in the Medical Department of Hamline University. Minneapolis, Minn.

The pathological and other abnormal conditions to which electricity in one modality or another is being applied to great advantage as a remedial agent are many, and the number will, doubtless, continue to be increased. It is but a brief period since the use of electricity in medicine covered little more than the faradic (induced), and the galvanic currents, with little regard to polar distinctions. At the present time the electro-therapeutist finds himself required to select modalities with a discrimination comparable to that of the physician in his choice of medicinal agents. Not that electric modalities are as numerous as the drugs of the pharmacopeia, but they are sufficiently numerous and varied in their effects, so far as they have been observed in the brief period of their therapeutic application, to give opportunity for careful consideration in making selection in individual cases.

By the discovery of the Roentgen ray, the d'Arsonval, the Tesla, and the Oudin currents, and the secondary currents peculiar to the static machine, this field of usefulness seems greatly enlarged, and what further shall be discovered in it is undoubtedly more than mere conjecture. Some of the currents peculiar to the static machine, as the well-known Morton wave current, the breeze, and the spark, by their pronounced influence over the modalism of the body, as well as over local disturbances, have well earned their important place in the *medicatrix naturæ*.

Nothing, it is safe to say, so spectacular and alluring as the Roentgen ray was ever discovered in the whole sphere of medicine. From the day of its discovery it has been subjected to the most careful scientific study, and much has been learned about it, but there remains too much in the obscurity of its significant christening to predicate very confidently what shall yet be revealed. Its potency for evil, whilst it betokens its usefulness, is continually to be reckoned with. But the currents of d'Arsonval, of Tesla and of Oudin, designated as the high frequencies or the high potentialities, are marvelous, both in their characteristics and in their capabilities. They are transformations of the secondaries of both the static machine and the Ruhmkoff coil, by which painful, injurious and destructive currents become at once safe, comparatively painless and of very great therapeutic value, so far as they have been considerately used, and, although they are only in their infancy, it can not be otherwise than that they have within them a vast store house of usefulness in the domain of medicine.

416 Pillsbury Building.

[Written for the MEDICAL BRIEF.]

The Abdomen Regionally Considered.

BY W. E. LEWIS, M. D.,

Professor of Descriptive and Practical Anatomy in Miami Medical College; Member of Association of American Anatomists, Etc. Cincinnati, Ohio.

The organs contained within the abdominal cavity are the greater part of the alimentary canal, as the stomach, duodenum, jejunum, ileum and colon, divided arbitrarily into the cecum, ascending, transverse and descending colon, sigmoid flexure and rectum, the liver and pancreas, glandular organs tributary to the alimentary canal, the great ductless gland, the spleen, the urinary system, consisting of the kidneys, upon the summit of which are mounted the suprarenal capsules, the ureters, bladder, and a portion of the urethra, surrounded by the prostate gland in the male. In the female we have also the uterus with its appendages, the fallopian tubes, the ovaries and their ligaments. Normally, these organs bear a definite relation to each other, as well as to the abdominal cavity. The relation of the hollow viscera, as the alimentary canal, uterus and bladder, depend upon their state of distention. The position of the spleen is also modified, under normal physiological conditions. As practically fixed organs, we have the liver, with its gall-bladder, the greater part of the duodenum, pancreas, kidneys,

with the greater portion of their excretory ducts, and the suprarenal glands.

The relation of the abdominal organs to the peritoneum is of vital importance, and its evolution during development is somewhat complex and intricate. Its relation to the various organs at the completion of its evolution is not so difficult of comprehension if we think of them as being primarily retro-peritoneal, and that during development and growth some of them become invaginated, to a greater or less extent, by the peritoneum, and others do not. Following this conception we find that the stomach invaginates itself into the peritoneum, and is practically completely invested by it. Imagine again the liver following the stomach between the same folds, though not directly. The folds between the lesser curvature of the stomach and the tranverse fissure of the liver becoming the gastro-hepatic omentum. The invagination of the liver is arrested before it becomes completely invested, and we have, therefore, its posterior surface maintaining a direct relation to the posterior abdominal wall. What are usually designated as descending and transverse portions of the duodenum maintain their original retroperitoneal position and are there fixed, and are covered only on their anterior and lateral surfaces. The segment of the primitive gut which is to become the ileum and jejunum, grows enormously, and, as its two extremities are practically fixed, we have the convoluted arrangement necessarily invaginated between two folds of the peritoneum, known as the mesentery, which extends obliquely usually from the left side of the body of the second or third lumbar vertebra to the right sacro-iliac articulation. We are now in the immediate neighborhood of the beginning of the large intestine, viz., the cecum, which is found to have insinuated itself to such a degree as to become completely invested by the peritoneum forming the meso-cecum. Passing upward from the cecum to the under surface of the liver we find the ascending colon adherent to the posterior abdominal wall, and invested only laterally and anteriorally by peritoneum. The transverse colon, which extends from the under surface of the liver to the immediate neighborhood of the inferior extremity of the spleen, is found to have left the posterior wall of the abdomen, and in doing so carried through these folds of peritoneum a connection with the posterior wall. This connecting fold of peritoneum is known as the transverse meso-colon. At the splenic flexure the colon is anchored to the inner surface of the lateral abdominal wall by a fold of peritoneum, known as the phrenocolic ligament, upon which rests the inferior extremity of the spleen. The descending colon has, usually, the same relation to the peritoneum as the ascending, though it may have a short mesentery. The sigmoid flexure, sometimes designated pelvic colon, which extends from the margin of the crest of the ilium, on the left side, to the front of the third sacral vertebra, is invaginated into the peritoneum, and has, therefore, a mesentery which allows a considerable degree of mobility. Succeeding the sigmoid flexure is the rectum, which is sometimes subdivided into the rectum proper and the anal canal. The first division of this classification is at first covered by peritoneum at the sides and in front; farther down, in front only, from which it is reflected upon the posterior surface of the bladder, in the male, and the posterior upper one-fifth or one-fourth of the wall of the vagina, in the female, and then on to the posterior surface of the bladder. The anal canal is destitute of any peritoneal investment.

The pancreas retains its original retroperitoneal position. Its posterior surface is, therefore, not covered by peritoneum.

For all practical purposes, the spleen is completely invested by peritoneum.

The relation of the urinary system, including the suprarenals, to the peritoneum, is readily understood if we conceive the kidneys, the ureters and the bladder introduced through the pelvic outlet, the kidneys being carried upward behind the peritoneum to the lumbar region, carrying with them the greater portion of the ureters, the bladder being left, as it were, at the pelvic floor, and, eventually, being invested upon its posterior and lateral surfaces by peritoneum.

The uterus, including its appendages, can also be conceived as introduced through the pelvic outlet between the rectum and bladder, and as they ascend carry a fold of the peritoneum, lining the pelvic floor, which, extending laterally, forms the broad ligaments.

In addition to the foregoing, the abdominal cavity contains the abdominal aorta and its ramifications, the inferior vena cava and its tributaries, the solar hypogastric and pelvic plexuses, with their afferent and efferent nerves. The primary arterial and venous branches, as well as the nerve plexuses, are retroperitoneal.

The foregoing brief description of the relation of the peritoneum to the abdominal contents is intended to emphasize the fact that all the viscera, including the vessels and nerves, are primarily extra-peritoneal. Some remain so, while others become more or less invested by it. The structures which were before referred to as fixed to the posterior abdominal wall, and, therefore, not covered on their posterior surface by the peritoneum, are the posterior surface of the liver, kidneys, ureters and suprarenals, descending and transverse portions of the duodenum, the pancreas, and, usually, the ascending and descending colon and what was denominated as the first part of the rectum. The base of the bladder, prostate gland, as well as the anal canal and a greater portion of the vagina, can also be referred to as extra-peritoneal. These organs can, therefore, be reached without implicating the peritoneum.

In contemplating the anatomy of the pelvic outlet, we are almost persuaded that the Omnipotent had in view what might be termed the physiological pathological conditions incident to senility affecting the bladder, prostate, anal canal or vagina, all of which, as before stated, can be reached without danger to the peritoneum.

The stomach, including the first portion of the duodenum, the small intestine, the transverse and sigmoid colon, the cecum, and rarely the ascending and descending colon, and the spleen, are completely invested by peritoneum. A characteristic of these organs is mobility. The uterus and its appendages also owe their mobility to being completely invested by peritoneum.

I have purposely referred to the contents of the abdominal cavity before considering the cavity itself, as I believe such an order more impressive and intelligent. I will next briefly refresh your memory as to the anatomy of the cavity. Age and sex impress certain characteristics upon it. However, its shape in general is said to be ovoid, its long axis vertical, the extremities being directed upward and downward. The upper limit or roof is concave, and is formed by the under surface of the diaphragm. The floor, also concave, is formed by the levatores ani and coccygei muscles. The posterior wall is formed by the lumbar vertebræ, and if we regard the pelvis as part of the cavity, by the sacrum and coccyx, the crura of the diaphragm, the psoas and quadratus lumborum muscles. The lateral boundaries are the lower six ribs, the diaphragm intervening, the transversalis, the internal and external oblique muscles, and the inner surfaces of the ilium and ischium. The anterior wall is formed by the two oblique, transversalis, and recti muscles and their aponeurotic expansions, and the inner surface of the bodies and rami of the pubes. The whole of the internal surface is lined with a continuous fascia, which receives various names, distinctive of its relation, as lumbar, transversalis, iliac, pelvic, recto-vesical, etc. Posteriorly, the abdominal cavity is greatly encroached upon by the projection forward of the bodies of the vertebræ.

I would especially call attention to the relation of the diaphragm to the cavity. The central portion of the diaphragm is tendinous, and is placed almost horizontally. On the right side, during expiration, the diaphragm ascends to the level of the fourth rib, on the left side to the level of the fifth rib. In this connection I might remind you of the fact that the fibrous layer of the pericardium blends, or, in other words, is attached to the diaphragm by means of ligaments. Above, the pericardium is connected to the deep cervical fascia. This arrangement indirectly connects the tendinous portion of the diaphragm to the cervical portion of

the vertebral column, and thus maintains it in its horizontal elevated position.

As my space is limited, I can only very briefly refer to the medical and surgical sides of the subject, and shall confine my remarks more especially to the anterior wall. For convenience and accuracy when referring to the contents of the abdominal cavity, anatomists have divided it into regions. The limitations of these regions vary somewhat, as different authors select different levels, etc., for indicating on the surface the boundaries. The subdivisions, as adopted by Cunningham, seem the most practical, as the lines are extended between bony eminences. Two horizontal lines are drawn around the trunk, the upper one at the level of the lower border of the tenth costal cartilage, and is designated the subcostal. This is on a level, posteriorly, with the disk between the second and third lumbar vertebræ. The lower line is on a level with the highest point of the iliac crest, as seen from in front. This is about two inches behind the anterior superior spinous process of the ilium, and is designated intertubercular line, as the crest presents at this point on the outer lip a tubercular eminence. This line is on a level, posteriorly, with the middle or upper part of the body of the fifth lumbar vertebra. Vertical lines are drawn upward from Poupart's ligament, midway between the symphysis pubis and the anterior superior iliac spine, and are designated Poupart's lines. They bisect the horizontal lines at right angles. From the various lines imaginary planes extend through the cavity, dividing it into nine regions. The horizontal lines divide the abdomen into three zones, named from above downward, costal, umbilical and hypogastric. A more suggestive name for this zone would be iliac, as the ilei hold the same relation to it as do the costæ to the costal zone, and it is far removed from the stomach; in fact, another zone intervenes. By means of the vertical lines the zones are divided into nine regions, usually designated right and left hypochondriac, epigastric, right and left lumbar, umbilical, right and left iliac, and hypogastric. A more suggestive name for this last region would be suprapubic.

A detailed description of the contents of each region would extend this paper beyond the allotted space, and this must be omitted. Much attention has always been paid to the physical examination of the contents of the thoracic cavity, while the abdominal cavity has only of late years attracted the attention of the more progressive physicians and surgeons, and it has proved a most fruitful field, not only pathologically, but financially as well. To the trained and careful observer the general appearance of the abdominal wall is pregnant with suggestions which invite confirmation by means of palpation and percussion. Engorgement of the superficial veins of the abdomen is suggestive of conditions which obstruct the portal or hepatic circulation. These obstructions may consist of intra-abdominal tumors affecting the stomach or duodenum, enlarged lymphatic glands, especially at the transverse fissure of the liver. Engorgement of these superficial veins may also be due to various pathological conditions of the liver itself, or to a tricuspid insufficiency, which may be manifested by the pulsations of the right ventricle, being transmitted to the inferior vena cava, resulting in an abdominal pulsation simulating an aneurismal throb. The normal rhythmic movements of the abdominal muscles become exaggerated in diseased conditions which interferes with full expansion of the lungs, while the movements are diminished in intra-abdominal conditions, especially of an inflammatory nature accompanied by pain. Retraction of the abdomen is seen in the emaciated, in various cerebral diseases, especially in tubercular meningitis of the young. Enlargement of the abdomen suggests ascites, tumors, hypertrophy of some organ, tympanites, gaseous distention of some segment of the alimentary canal, or pregnancy in the female. Palpation and percussion of the abdominal wall are pregnant with information regarding the condition of its contents. Auscultation detects the bruit of aneurysmal tumors, the gurgling of imprisoned intestine, the fetal heart, and the placental murmur in pregnancy.

Surgically, the abdominal cavity is of paramount importance. Not an organ or

structure within but may require surgery. Some can be reached from behind, thus avoiding injury to the peritoneum. Most operations, though, are from the interior surface. This renders the anatomy of this region of special importance. The character, as well as the physical properties of the wall, are to be taken into consideration. All the muscles of the anterior and lateral abdominal walls can be regarded as having their fixed point below, and attached to some part of the thorax above. Extending vertically from the pubis to the thorax, parallel with each other, are the two recti muscles. Their inner borders are practically in contact below, but as they ascend and, especially above the umbilicus, they diverge, leaving a considerable interval between them, which is occupied by the union of the aponeurosis of the muscles in this situation. A line extending from the ensiform cartilage to the symphysis pubis is the classical linea alba. From a little below the umbilicus there is no depression or groove, as the two recti are in contact through their sheaths, and, besides, this region is, usually, covered with a varying amount of adipose tissue. At the outer border of the recti the aponeurosis of the flat muscles are arranged in such a manner as to form sheaths for them, and here are found the so-called linea semilunares, which are not semilunar. As terms more appropriate and suggestive for these surgical landmarks or areas I would substitute for the linea alba, which is not a white line, linea tendinosæ centralis, as it is tendinous in structure and central in position. For linea semilunaræ, I would substitute linea tendinosæ lateralis. These tendinous lines offer some advantages for incisions into the abdominal cavity. However, the disadvantages as to the future integrity of the incised area outweigh the advantages. Cicatrices in fibrous tissue, owing to its inelasticity, are prone to rupture under pressure. The character of the wall in the iliac regions is similar, especially in the neighborhood of the inguinal canal, and the various operations in this region for hernia are, necessarily, fraught with danger as to the future.

The costal zone has, of recent years, acquired well-merited attention. In this region are to be found the liver, with its excretory apparatus, the stomach, part of the duodenum, and the spleen. What were formerly regarded as various forms of indigestion, gastralgia, bilious attacks, etc., are now, thanks to surgery, known to be of a surgical nature, as ulcer of the stomach or duodenum, malignant disease of these same organs, inflammatory or obstructive conditions of the gall-bladder, the cystic, hepatic or common bile duct. The right half of the costal zone, especially in the neighborhood of the vertebral column, should be thoroughly familiar to the surgeon who contemplates work in this region. Here are found the hepatic flexure of the colon, the duodenum, embracing in its concavity the head of the pancreas, the common bile duct with its tributaries, the kidney, the pelvic expansion of the ureter, the suprarenal capsules, portal vessels and inferior vena cava, all bound, to a varying degree, to each other, and to the vertebral column by areolar tissue.

The brilliant results obtained in the surgery of the upper region of the abdomen by Mayo, have given him well-merited reputation, and I sometimes think we might, with propriety, designate the costal zone as Mayo's zone. We have Scarpa's triangle, Hesselback's triangle, the space of Retzius, the tubes of Fallopius and Eustachius, the ducts of Wirsung and Stenson, the circle of Willis, none of which are, in themselves, indicative of anything anatomical, but serve to perpetuate the memory of distinguished anatomists.

409 East Fifth Street.

[Written for the MEDICAL BRIEF.]

Practical Hints on the Care of the Hair and Scalp.

BY GEORGE WARREN SPENCER, M. D.,

Professor of Physiology and Dermatology in the Cleveland Homeopathic Medical College. Cleveland, Ohio.

For a proper understanding of the care of the hair and scalp it is necessary to consider the anatomy and physiology of the parts. Anatomically, we have a portion of the skin covered with a more or

less thick growth of hair, richly supplied with blood vessels, nerve endings and sebaceous and sweat glands, the latter infinitely more active than in any other portions of the cutaneous surface, and consequently more susceptible to external as well as internal disturbances.

Physiologically, the hair is intended as a protection for the head against injury, changes of temperature, regulation of the degree of moisture, and all the essentials for which we wear clothing on other portions of the body.

Therefore, we must keep in mind these two things in the management and care of the scalp and hair.

As women have, by mere chance, adhered more or less closely to lightly-constructed headgear, permitting abundant ventilation, and as the length and thickness of their hair does not permit of rough and systematic rubbing, the scalp is protected from undue violence. It is in the male, therefore, that we see the marked results of neglect or abuse in the care of the scalp and hair. At an early age the hair of the boy is closely clipped, with the result that the principal function of the hair, protection, is in part, destroyed. Consequently a thick hat or cap must be substituted. This headwear, for the most part, is entirely without ventilation, and the greatest care is exercised in getting a perfect fit, seemingly to keep the life-giving elements from the head. Undue heat accumulates, as there can be no radiation from a tightly closed space. As a result of this undue heat the sweat and sebaceous glands are more active, and moisture accumulates, which macerates the scalp and hair, thus making a good media for the development of disease. Sweat-bands irritate the forehead, and the condition spreads upwards, the effect of which, on the forehead, becoming higher and higher.

As if this were not enough, most men and boys think it necessary to scrub their scalps with soap and water, drying by violent rubbing with a rough towel, or submitting to a shampoo, which leaves the scalp in a tender and congested condition favorable for infection and sensitive to atmospheric changes.

The stiff brush can only be of great injury to the scalp. I can not advise any but the most gentle and antiseptic treatment of the hair and scalp. The only lotion that need be used is pure water and a good soap, washing the scalp carefully with warm or tepid water, and rinsing thoroughly with clean water, and lightly rubbing the hair dry with a towel, or, better still, fanning it dry.

If some disease or disturbance is present, as indicated by slight itching of the scalp, then Hg CL_2 1/2000 can be sparingly used.

830 Rose Building.

[Written for the MEDICAL BRIEF.]

Nourishment in Surgical and Medical Cases.

BY FRANK K. WILMETH, M. D.,

Dean of the Lincoln Medical College; Professor of Principles and Practice of Medicine in Same. Lincoln, Neb.

This plan of securing nourishment in surgical and medical cases occurred to me some years ago, during the management of the following case:

A young woman, twenty-seven years old, was admitted to the hospital suffering from a bilateral pyosalpingitis. She had been nauseated and vomited during a period of forty-eight hours, when she was unable to retain any nourishment by the mouth or rectal injection. I operated at once. She was put to bed and about six hours afterward developed symptoms of shock, and appeared in a grave condition. She recognized me when I called to see her, spoke to me, and with a slight shrug of the shoulders commenced to have spasms of the limbs, and became delirious. I decided her condition was due to lack of nourishment. I directed the nurse to bring a four-ounce preparation of beef blood, with eight ounces of normal salt solution, and the infusion injected under the mammary gland on either side. In less than one hour from this I noted the pulse come down rapidly and increase in strength. The patient turned over in bed and asked me when I came in. I immediately retired and the case progressed uninterruptedly. In forty-eight hours from this time she was able to take nourishment by mouth and made an uneventful recovery.

Since that time it has been my custom in all cases where, for any reason, the patient was unable to properly digest food, or the vitality low, to use this preparation subcutaneously with a normal salt solution, varying usually from twenty-five to fifty per cent of the preparation of beef blood. The use of from twenty-five to fifty per cent of this preparation, with normal salt solution, each eight ounces, will sufficiently nourish a patient for twenty-four hours.

This method of feeding will at once commend itself to all physicians as being absolutely as certain as a hypodermic injection of heart stimulant, or any other material that might be used. It nourishes; the nutrient material being absorbed in the circulation if there is sufficient circulation to sustain life for from one to two hours. I have used it in various kinds of medical, as well as surgical cases, and in weak or anemic persons, or those exhausted by long illness, and have found it to be the most successful method of feeding in these cases, with which I am acquainted. This method is not new, having been discussed at various meetings some years ago, but at the time I commenced its use I had not heard that it had ever been used.

If superficial inflammation occurs at the points where injections are made, hot normal salt fomentation will, in nearly all instances, prove sufficient to dispel the inflammation.

1415 N. Street.

[Written for the MEDICAL BRIEF.]

Report of a Case of Gastric Ulcer.

BY CHARLES W. MCGAVRAN, B. SC., M. D.,

Professor of Physical Diagnosis in the Ohio Medical University; Visiting Physician to the Protestant Hospital.
Columbus, Ohio.

A. B., aged twenty-nine, married, railroad conductor by occupation, born in Ohio, presented himself for treatment for "stomach trouble," from which he had suffered for fifteen years.

He gave a history of the usual diseases of childhood, diphtheria at five; claims he was not well since, and was never considered strong as a child. Had an attack of pneumonia in 1894, and another in 1896, the second attack following measles. Both attacks were severe. Typhoid fever in 1905, moderate in severity; duration three weeks. At the age of fourteen patient complained of pain upon lying down. This condition remained until the present, becoming more severe at intervals. For fifteen years he has been unable to sleep in a recumbent posture, requiring from three to four pillows to lift the shoulders. He states that while in this position he is free from pain. Appetite fair, bowels more or less constipated, no vomiting. Stools dark. Presence of food in stomach apparently has no influence over pain. No history of syphilis, family history negative.

Physical Examination.—Patient tall, poorly nourished, anemic in appearance. He is six feet tall and weighs one hundred and thirty-three and one-half pounds; tongue coated. Area of tenderness just to the left of the ensiform appendix. Stomach, when not distended, reached to the level of the umbilicus; when distended it reached about two inches below the umbilicus.

Examination of the gastric contents showed free hydrochloric acid, .65; total acidity, .90. Tests for occult blood were positive, although there was no free hemorrhage on first lavage; during the second examination there was free hemorrhage in the lavage. Stools were dark colored. The guaiac turpentine test showed blood to be present.

Diagnosis of ulcer involving the upper and posterior surface of the lesser curvature.

Treatment consisted of lavage with one ten-thousandths of silver nitrate every third day, giving silver nitrate, one-quarter grain doses, in large quantities of water four times a day. This treatment was followed by an amelioration of all the symptoms. Last examination of gastric contents showed them to be normal, and patient free from pain.

This patient was one of a family of large-sized, healthy men. His brothers shared the same food and lived under the same conditions, and the only reason ascribed by the patient for his failure to gain flesh was the continual pain. There

must be some connection between the pain in the epigastrium and the continued loss of weight. Clinical examination showed free blood in the stomach and occult flow in the stools.

I think the history of this case illustrates the fact that we may have an ulcer at the upper and posterior part of the stomach without pain being increased upon the taking of food. At the same time pain is caused by the patient assuming the dorsal position, permitting the food to come up, the pain being relieved when the patient again assumes the upright position.

Long and Jefferson Streets.

[Written for the MEDICAL BRIEF.]

A Case of Twenty-Five Convulsions in Twenty-Four Hours, With Recovery.

BY L. F. BARNEY, M. D.,
Assistant Professor of Surgery in the Kansas University.
Kansas City, Kansas.

I was called at 9:30 one night to see a man suffering from convulsions. I was given the following history:

Patient, a man of twenty-three, who was employed as teamster in a nearby packing house. He had worked that day as usual, and on his way home had remarked to a friend that he was feeling particularly well. He had eaten a hearty supper, then had gone to a barber shop, and was shaved. Returning to the house, he acted rather peculiarly in that he seemed cross, but went on upstairs and to bed. Half an hour later a noise was heard in his room, and, on investigation, he was found in a convulsion, which lasted about three minutes. He was in a comatose condition, and an effort was made to lift him into a more comfortable position, when he immediately had another convulsion. I was telephoned for, and found him twenty minutes later in another convulsion. I started to move him, and he had another convulsion, apparently epileptic; he frothed at the mouth; had convulsive movements of the limbs, and had every appearance of epileptic seizures, except, perhaps, that in epilepsy convulsions are not repeated in so short a period. He was given no medicine that night. Next morning I saw him again, with Dr. Palmer, who had also seen him the night before, and he appeared in fair condition. During the night he had five more convulsions. At two o'clock in the afternoon we were called, and found him having convulsions every fifteen minutes. His pulse grew slow, and he appeared to be failing rapidly. I catheterized him, and drew off a small quantity of urine, which I examined for albumen, but found none. While I was making this examination Dr. Palmer called to me that the man was dying. We gave him a hypodermic injection, also a high enema, and he rallied. The prognosis seemed most unfavorable. He had seventeen convulsions between 11:30 and 10:30 that night. We remained until 10:30 at night, until the convulsions had ceased, and returned next morning hardly daring to expect that he would be alive. However, there were no more convulsions during the night, and next day he returned to his home in Atchison, where he remained two weeks and returned here feeling perfectly well.

The question with me is, what was this? Was it a case of uremia?

552 Minnesota Avenue.

[Written for the MEDICAL BRIEF.]

What Peculiarity is There in Climate That Favors the Growth of Pine Trees, and Does This Peculiarity, Whatever It May Be, Favor the Cure of Consumption?

BY ALBERT S. ASHMEAD, M. D.,
New York City.

Col. F. T., an old soldier of our civil war, was a sufferer from "consumption." In quest of climatic conditions which would be beneficial, or perhaps restore him to health, he had spent a summer up North, on the lakes, one season in Colorado, a year in California, and some time in New Mexico and Texas, besides making several trips East.

The origin of his illness was, it was thought, a gunshot wound, the bullet penetrating the right lung. Thirty years

after receiving the shot he died of consumption. Much of the time he was a confirmed invalid, and read a great deal—among other things all kinds of books and literature bearing on his affliction, so he was fairly-well posted. During the last year of his life he spent much time in poring over statistics of every phase of the disease, especially that relating to mortality, the country or section showing the highest and lowest percentage of deaths from consumption.

From his studies, he became convinced that the pine and turpentine regions of Georgia offered the best inducements for the relief or cure of those afflicted, as he was, with affections of the lungs. Like many others, however, he deferred his visit to Georgia until he was unable to make the trip, and died fully believing health and vigor was in store for him if he could be spared to make the journey.

An article in the *New Albany Medical Herald*, on this subject, bears out his theory of the pine regions for consumptives, and induced the writing of this communication in the hope somebody might be benefited. In the article alluded to, Dr. David P. Jackson, of Toledo, mentions the case of a young woman, aged twenty, afflicted with asthma, bronchitis, etc., who was sent to Pine Bluff, N. C. In two months she had gained fourteen pounds, could take long walks, and was otherwise greatly improved. She was given no particular treatment, the benefit being all due to the climate, the peculiar conditions of which enables invalids to enjoy outdoor life all winter. The country is made up of white sand to a depth of fifty to ninety feet; there is a good rainfall, and the objectionable features of a rainless region are avoided, but the sand formation gives the dry air and soil needed for the cure of lung diseases.

It is the turpentine region. Pine Bluff is "a winter camp in the pine woods, and the vast forests of the long-leaf pine give terebinthinate and ozone qualities to the air. The water seems to have antilithemic qualities."

Thus it will be seen that this section has a combination of climatic conditions not usually found together, namely, a temperate climate, both winter and summer, a good rainfall, a dry air and soil, and a pine forest *producing ozone*. Access to the place is easy and inexpensive, fuel is cheap and abundant, the expense of living is low, and people of moderate means may avail themselves of the advantages of an economical health resort. Life there is simple, restful and pleasant, the conditions of life being not unlike an old-fashioned Northern country village, with the important exception that invalids may enjoy outdoor life all winter. The place is well adapted to patients from the North, with such diseases as incipient consumption, asthma, chronic bronchitis, catarrhs of the air passages and digestive system, lithemia, Bright's disease, etc.

On the Pocono Mountains of Pennsylvania, where the best results have been obtained in the treatment of consumptives, the hemlock and rhododendron grow. The camp of tents was in a hemlock grove. It seems to me that it is more the peculiar climate favoring the endurance of the pine over other timbers, rather than a fragrance of medicinal virtue eliminated from the tree, which favors the cure of consumption in these special regions over others.

50 Cathedral Parkway.

[Written for the MEDICAL BRIEF.]

Lactation.

BY D. A. ZWIGTMAN, M. D.,
Niles, Mich.

A few years ago the infant of a primipara died, and the mother having a superabundance of milk secretion, suffered excruciating pains.

I decided to paint the mammæ with a five per cent cocaine solution. The pains disappeared, and with it after two days, the secretion of milk.

I have tried this simple remedy in a number of cases with the same good result, and thought it worthy of communication.

In case there is secretion of milk in the breasts of infants the most simple remedy to normalize the glands is to use belladonna salve on soft, thin leather. In less than no time a cure is completed.

[Written for the MEDICAL BRIEF.]

Does Syphilis Secure Immunity?

BY J. HURLEY SCHALL, M. D.,
Consulting Genito-Urinary Surgeon to Jamaica Hospital.
Brooklyn, N. Y.

Mr. J. D., aged twenty-five years, single, was referred to me with the following history:

In January, 1899, he contracted a suspicious-looking sore of the glans penis, which developed about five weeks after having intercourse with a prostitute.

At the time the first lesion appeared, he was in the army, and consulted a Government surgeon of unquestionable skill, who diagnosed a chancre.

The characteristic symptoms of syphilis, in due time, followed.

Under careful treatment the case progressed satisfactorily, all symptoms of the disease clearing up in fifteen months.

Since then he has been under constant surveillance. By close questioning, I was unable to elicit any symptoms that showed he was not cured. April 13, 1902, about thirty-five days after exposure, a second sore appeared, a little below the site of the original chancre.

Upon examination, the erosion presented an oval appearance, with a slight serous exudate. Pinching it between the thumb and finger it gave some resistance, but no pain. There was no edema about its edges.

Bilateral inguinal and epitrochlear adenopathy was marked. Shortly after the appearance of the enlarged glands, the patient complained bitterly of headache, backache and general malaise, with some temperature.

A coppery, brown, macular eruption, appeared on the trunk and loins. It was level with the skin and disappeared under pressure.

The pain in the bones of the extremities was marked.

The lateral portion of the tongue and buccal cavity contained mucous patches, the size of a pea.

The tonsils were hypertrophied, and the pharynx much congested.

These symptoms did not respond to treatment until mercury was given.

The patient did well under specific treatment, all of his symptoms having entirely disappeared.

In the presence of such evidence of syphilis, it seems impossible to diagnose this case as anything else.

141 St. Marks Avenue.

[Written for the MEDICAL BRIEF.]

Ottomar Rosenbach — Character Traits of His Life, Collected from Tributes Paid to His Memory.

BY DR. A. ROSE.
New York.

Nothing is more instructive and useful for medical life and work than to obtain an insight into the character of great and noble men of our profession, as it stimulates reflection, and has an ennobling influence upon our education. The idea readily suggests itself to relate a few beautiful features of the life of a man like Rosenbach, not only because he was one of the best and most prominent physicians of his time, but also because he was a special friend of THE MEDICAL BRIEF.

I have published his biography in the April number of this journal of 1904, and paid a tribute to his name in the May number of 1907, while in the present article I propose to present a selection of what those who knew him best, his nearest friends and pupils, have written about him.

The excellent character of this distinguished man, the tender care he evinced for those with whom he came in contact was even demonstrated beyond the grave. He died on March 20th of the present year, and it was only two days later that his friends were notified of his demise; such had been his distinct instructions. Not only had he forbidden any funeral procession, but even every external sign of mourning, so that the ladies of his household were dressed in white when receiving the visits of sympathizing friends who called to condole with them in their bereavement.

His medical activity covering a long flight of years had served to deepen his gentleness of character and the intensity

of his compassion. For everybody he met he showed kindness and sympathy; in the treatment of his patients he displayed that great art of making sufferers feel that he felt with them, while in the examination of the cases he exhibited much gentle care which went a long way to relieve their sufferings.

In every respect Rosenbach was an unusual personality, a physician the like of whom has only rarely existed. His diagnoses were remarkably clear-sighted; in the prognoses he but rarely erred, and in the domain of therapy he was remarkably successful. It is a characteristic fact that a large number of colleagues consulted him for his advice. His love and capacity for work were truly astonishing. An original thinker of rare perception, he was no slavish follower of authorities, but claimed the right of working out his problems for himself, and there were few of these, indeed, to which his reasoning failed to impart a new aspect. Endowed as he was with great power of penetration, gifted with rare kindness of heart and gentleness of disposition, he did many acts of benevolence, always taking care that they did not come to the knowledge of third persons. He had a full understanding for human foibles. His sense of justice was so strongly developed that he invariably came to the aid of those ill-used.

His theoretical conviction could not be shaken, even in the face of the opposition of the majority of his colleagues. Among old practitioners there were many whose views had advanced far enough to follow Rosenbach's flight of thoughts, and to share his opinions, while among the younger generation many colleagues showed more interest and understanding for Rosenbach's teachings than is generally shown by the authorities now ruling. During his comparatively short career his prolific master mind created or remodeled a large number of new and important conceptions, opposed other and older views, attacked long established doctrines, trusting his own soundness of judgment, although it might often be in opposition to the trend of prevailing opinions; in fact, he displayed so far-reaching an activity that his footsteps on the onward march of medical science will forever be indelible.

Among his two hundred and seventy-eight books, monographs, treatises and papers, not one bears the stamp of commonplace or suffers from that narrowness that sometimes marks the repetition of research. In spite of the plentitude of his writings, Rosenbach always presented something new and independent. He was always ingenious, frequently polemic and contradicting; often full of sarcastic humor and pointed irony, but always ready with zealous earnestness to defend against the whole world facts the truth of which he had once recognized. Regardless of his own disadvantage, his mind was forcefully concentrated upon the great truth for which he fought. In this he did not confine himself to medical science, but also included social problems, professional good-fellowship, even questions of natural science and psychology.

Rosenbach had an inclination to occupy his mind with theoretical problems, and this scientific tendency has borne fruit in practical medicine; to it we owe his doctrine of functional pathology, of organic insufficiencies, of the effects of suggestion, of psychic treatment, doctrines for which he had, at times, to overcome much opposition, although at the present time they have long been accepted as established truths. His doctrine of energetics which is not yet sufficiently valued, already finds its practical confirmation in biochemistry and biophysics.

A pupil of his uncle, Traube, and of Cohnheim, he is also responsible for a large amount of exact clinical and experimental work, which has proved of importance. As illustrative examples, mention may here be made of his experiments on the insufficiency of the aortic valves, his doctrine of the mechanism of the vocal cords, the treatment of dilatation of the stomach. He was one of the first to recognize the importance of functional insufficiency in regard to the mechanism of the stomach, and the first mature result of these reflections was embodied in his frequently cited treatise on the mechanism and diagnosis of stomach insufficiency in 1878. By virtue of his writing thus early on this subject, Rosenbach

must be regarded as the founder of functional diagnostics of diseases of the stomach. Since that time the domain of "motor and mechanical insufficiency" has been introduced as one of fundamental importance into the diagnostics of affections of the stomach. It was just this interpretation of the functional efficiency and insufficiency which formed the starting point for Rosenbach's later studies of energetics which he applied to the entire human pathology. To me personally his experiments with carbonic acid were of particular importance, he having demonstrated facts which led me to introduce my treatment of dysentery and rectal fistula. After I had demonstrated and proved that rectal fistula may be promptly, completely and permanently cured without operation by the application of carbonic acid, he congratulated me on having solved this problem.

His activity practically embraced all special branches of medical science; he benefited and developed them all, but none more than the affections of the heart which, by his doctrine of functional diagnostics, were placed on a partly new foundation, his teachings exercising a material influence on prognosis and therapy. By his work on "Diseases of the Heart and Their Treatment," he has acted as pioneer in this respect.

Rosenbach was a born experimenter, and his experiments succeeded in defining the involved problems with rare perspicacity, taking all possibilities into consideration. He recognized the great difficulties which beset the path of a satisfactory experimental answer to a scientific question. This refers especially to animal experiments, in regard to which he warned against exaggerated expectations. He was particularly happy in the critical and successful utilization of his experiments and experiences, his ability of associating ideas being truly wonderful. Thus, on the basis of a case which he had carefully observed himself, together with the critical utilization of similar cases described in the literature, he established the famous law of the different vulnerability of the recurrent fibers. He immediately recognized that this was only a special application of a general law, namely: that in affections of the nerve trunks or of the central organs the flexors are paralyzed later than the extensors.

Rosenbach always considered it one of his principal tasks to support the unification of the medical practice as opposed to the ever-increasing division into special branches, thus favoring the idea of allotting to the general practitioner the entire domain of medicine.

Although he attached great value to experimental research, and readily recognized the importance of their results in the interest of science, he again and again raised a warning voice against the danger of over-estimating diagnostics and therapy born exclusively in the laboratory. In the fight against the ruling power of bacteriology he has likewise achieved success by calling attention at an early date to the protective power of the organism and the multiformity of its reactions, criticising severely the exaggeration of specific treatment.

In 1890, when Koch recommended his tuberculine, Rosenbach's fight against bacteriology had its beginning. In many respects results have already now proved him to have been right; in other points the future will probably prove him to have been right again. His collected papers on this subject were published in his book, "Physician vs. Bacteriologist," in 1903, which produced an effect like a thunderbolt from a clear sky. On the other hand, Rosenbach was by no means an enemy of bacteriology, the importance of which as a biological science he fully appreciated. But he opposed the presumption of the "nothing-but-bacteriologist" theory to consider themselves better judges than the physician at the bedside; he also deprecated the exaggerated fear of infection and the rigorous measures taken for isolation and disinfection as constituting deteriorizing factors in both social and ethical aspects.

Unfortunately, Rosenbach has not met from different reasons with that appreciation which he unquestionably deserved. The principal reason seems to be that he lived too early, at a period where the trend of the times was opposed to the aspirations of "natural philosophy." But

neither ignoring his works nor the disparaging criticisms which sometimes appeared under the guise of scientific dissertations, were able to deprive him of his convictions or of his faith in the final victory of his ideas. For intelligent criticism, however, he was always grateful; indeed, he was better pleased with well-meant censure than with empty phrases of praise.

May the time soon come when the merits of this remarkable man will be openly recognized.

[Written for the MEDICAL BRIEF.]

Fascia of the Pelvic Floor—Perineal Fascia.

BY BYRON ROBINSON, B. S., M. D.,
Chicago, Ill.

The fascia of the pelvis is of maximum value in resisting intra-abdominal pressure at the pelvic outlet. Fascia supports muscles functionate by contracting and relaxing. The levator ani fascia proximal and distal is of the most supreme importance in resisting the intra-abdominal pressure. The pelvic fascia is of marked importance in sustaining and controlling the vagina, bladder and rectum. The visceral fasciæ are exceedingly important in the viscera of the pelvis, as they are merely divisions or blades of the levator ani fascia proximal. The fascia of the pelvis strengthens the pelvic floor, fixes pelvic structures in definite relations, supports in ordered planes nerves, blood and lymph vessels. It prevents splanchnoptosia of the pelvic organs by being coalesced with the transversalis and iliac fascia. A remarkable characteristic of the pelvic muscles (levator ani, transversus perinei, constrictor vaginæ, coccygeus, bulbo-cavernosus) is extensive fascial attachments of one or both ends. The remarkable characteristic of the great levator ani muscle, is it is reinforced, backed, by powerful fibrous planes of fascia proximal and distal.

Fascial Nomenclature.—Onamatology becomes more important with the progress of medical science, owing to its increasing complexity.

As a teacher of anatomy I maintain that a fascia should be named according to the muscle or other structure with which it is in the most intimate relation. I shall, therefore, apply this simple nomenclature to the fascia of the pelvic floor.

The fascia covering the obturator internus muscle will be termed the obturator fascia. As this fascia is divided by the "white line" arcus tendinous extending from the dorsal surface of the pubis to the ischial spine, we will call that portion of the fascia proximal to the white line the obturator fascia proximal, and that portion of the fascia distal to the white line the obturator form distal. The fascia proximal to the levator ani, originally named by Tyrrell the recto-vesicle, and by Carcassone the pelvic aponeurosis, by others the vesical layer of the pelvic fascia, we will name the levator ani fascia proximal, and that part of the fascia distal to the levator ani, the levator ani fascia distal. The fascia covering the coccygeal and pyriformis muscles will be named according to those muscles.

The fascia covering the sacrum very naturally takes the name of the sacral fascia. With this substitution of simplified terms for the previous complex and multiple nomenclature in the pelvic fascia, we will proceed with a detailed discussion of the subject. The following table presents a comprehensive view of the pelvic floor fascia and the simple, natural nomenclature which I have adopted:

(C) Fascia of the pelvic floor.	1, Levator ani fascia, proximal and distal.	
	2, Obturator fascia, proximal and distal.	
	3, Coccygeus fascia, proximal and distal.	
	4, Pyriformis fascia, proximal and distal.	
	5, Sacral fascia.	
	6, White line (arcus tendinous).	
	7, Perineal fascia,	(a) superficial fascia, superficial layer.
		(b) superficial fascia, deep layer.
	8, Trigonum urogenitale—triangular ligament.	

THE INTERNAL PELVIC FASCIA.

The fascia of the lesser pelvis has a poor literature, and is not often described. As the pelvic floor fascia has much to do with the permanent results

of the flap or any perineal operation, I will write of it somewhat in detail.

The fascia of the greater pelvis, or that fascia lying proximal to the ileopectineal line, is not here considered. The fascia, the planes of strong fibrous tissue here under consideration, lie distal to the ileopectineal line.

The internal fascia of the lesser pelvis extends from the ileopectineal line on either side to the median raphe of the pelvic floor. It not only lines the pelvic walls and floor, but enters into intimate relations with the pelvic viscera. It is a strong, shiny, fibrous membrane, possessing a very varying quantity and quality. In a certain sense the fascia of the lesser pelvis should be treated as an independent structure, and not as a continuation of the iliac transversalis or other fascia. The ileopectineal line marks an absolute division between the iliac and obturator fascia.

The simplest plan is to describe the obturator fascia proximal (superior) and distal (inferior) and to consider the obturator fascia as distinctly belonging to the obturator (internus) muscle, subsequently to consider the fascia of the levator ani proximal (superior) and distal (inferior) with a lesser consideration of the coccygeus, pyriformis and sacral fasciæ. The fasciæ lining the lesser pelvis are intimately connected with their respective associated muscles and structures by strong connective tissue. The connection of the fascia with the peritoneum is not intimate, as thick, spongy, loose layer of the connective tissue, richly laden with fat lobules, lies between the peritoneum and the fasciæ lining the lesser pelvis. This loose connection of pelvic peritoneum and pelvic fascia allows the easy and rapid spread of pelvic abscesses between the pelvic fascia and the peritoneum in the subperitoneal tissue.

The obturator internus fascia surrounds the obturator muscle at its origin, from the lateral pelvic surface of the innominate bone, and is the special fascia of the obturator internus muscle. It is attached for a considerable distance to the iliac portions of the brim. At this point the obturator becomes attached to the proximal border of the obturator membrane. Ventral, the attached line of the fascia, passes distal, the ileopectineal line, to allow the obturator vessels and the nerve to enter the obturator foramen or canal. This portion is fixed to the periosteum and appears as an independent organ. Ventrally it is attached to the body of the pubis and along the proximal margin of the obturator foramen by an oblique line, to a point about one-half an inch distal to the symphysis. Where the fascia dips distalward to allow the passage of the obturator vessels and nerves it is firmly attached to the periosteum and nerves by strong tendinous fibers. Dorsally it is attached to the ventral surface of the great sacrosciatic ligament and the ventral margin of the great sacrosciatic notch. Distalward the fascia is attached to the margin of the obturator foramen of the descending ramus of the pubis, and it joins the falciform process of the great sacrosciatic ligament which firmly connects it to the internal border of the ischium and its ascending ramus.

With a firm insertion in the ileopectineal line, the ventral border of the great sacrosciatic foramen, the ventral and distal margin of the obturator foramen and to the edge of the falciform process of the great sacrosciatic ligament, the obturator fascia becomes a fixed, strong, thick, fibrous membrane in relation proximal ward with the obturator nerve and vessels and distalward with the internal pudic vessels and nerves, Alcock's canal. It has intimate attachments to the obturator internus muscle proximalward, but is quite loose distally.

The obturator fascia we divide into two portions proximal (superior) and distal (inferior). The obturator fascia proximal is that portion proximal to the white line or arcus tendinous. It presents into the pelvic cavity from the lateral aspect and is covered by peritoneum. The peritoneum and obturator fascia proximal are separated by considerable loose, fatless, snow-white connective tissue, composed of many shiny, thin, cleavable planes, which become easily dissected by the progress of pelvic abscesses.

The structures of importance which pass over the internal face of the obturator fascia proximal, distal, the ileopectineal line, are the obturator vessels and

nerves. These structures are liable to be injured by the head soon after its engagement by the brim or fixed bony ring of the pelvis. The obturator fascia proximal has a surface of about ten square inches.

The obturator fascia distal is that portion distal to the arcus tendinous, or white line. It presents internally into the ischiorectal fossa and externally toward the obturator internus muscle. It forms the external boundary of the ischiorectal fossa. At the distal part of the ischiorectal fossa, about an inch proximal to the tuberosity of the ischium, the obturator fascia planes become separated, producing a sheath—Alcock's canal—for the transmission of the pubic vessels and nerves. The obturator fascia distal has a surface of some five square inches, one-half the size of the obturator fascia proximal.

At the lesser sciatic notch the obturator fascia make its exit from the pelvis with the muscles and gains the dorsal femoral regions of the thigh. The obturator fascia is inserted into the ramus of the ischium and pubis, where it continues and blends with the triangular ligament of the urethra; hence the triangular ligament is a continuation of the bilateral obturator fascia.

The arcus tendinous, or white line, appears as an aggregation of tendinous fibers of the obturator fascia. It extends from the surface of the pubis to the spine of the ischium. It possesses a gentle curve or extensive radius with its concavity proximalward. The white line originates to that part of the levator ani muscle which arises between the distal dorsal surface of the pubis and ischial spine. The white line arises from the ligaments of the bladder; a thickened portion of the obturator fascia is the line or origin of two planes of fascia. The proximal plane I call the levator ani fascia proximal. The white line varies in thickness in individuals—generally is one-sixth of an inch in thickness in the middle, but its greatest strength and width is at the ventral end, where it assumes intimate relations with the pubovesical ligaments. In woman the white line is about four inches in length. Its origin at the pubis may be chiefly from the ventral lateral (true) ligaments of the bladder. The white line possesses considerable elasticity. It is quite firmly fixed at the ventral end, but, like a long, tight rope extending from two distant points, allows considerable range of motion and sagging in the middle.

The levator ani fascia proximal (rectovesical fascia of Tyrell, rectovesical aponeurosis of Carcassone or visceral layer of the pevic fascia) arises from the white line and passing medianwards aids to form the floor of the pelvis. The levator ani fascia proximal, as its name implies, covers the proximal surface of the levator ani muscle. The fascia loses itself in the median raphe dorsal to the rectum in the rectal, vaginal and vesical walls, and in the ventral and lateral ligaments of the bladder. From this relation, the levator ani fascia proximal becomes of significant interest in perineorrhaphy. Ventrally it is remarkably strong and short, being attached to the dorsum of the pubisproximal to the obturator fascia, from which it is separated by the origin of the levator ani muscle; the levator ani fascia proximal to the levator ani muscle and the obturator fascia being all three intimately adherent to the pubic bone and to each other.

If one carefully removes the peritoneum and loose subperitoneal tissue the levator ani fascia proximal may be plainly seen stretching, extending from the white line to the bladder, vagina and rectum. It may be stripped from the levator ani muscle in several thin, cleavable planes. It is reflected on the bladder forming the ventral (true) and lateral (true) ligament of the bladder; however, the lateral ligaments of the bladder may be assisted by ligaments from the vagina. The levator ani fascia proximal begins its ventral attachments at the distal border of the symphysis, continues then along the white line laterally to the ischial spine, continues from the ischial spine on the proximal surface of the levator ani muscle to the median raphe. The levator ani fascia proximal covers an area of about six square inches on each side of the median line of the pelvis.

The levator ani fascia proximal may be divided into the ventral or vesical portion, the vaginal and rectal portions.

The vesical portions of the levator ani fascia proximal is reflected from the pubis to the neck of the bladder, forming the ventral (anterior) true ligaments of the bladder and part of the lateral ligaments. The vesical portion is very thick and strong, even tendinous. It is reflected from the pubis in an arched manner. The vaginal portion of the levator ani fascia proximal is analogous to that which surrounds the prostate in the male. In the male, the prostate gland and vesiculæ seminales are surrounded by a strong capsule derived from levator ani fascia proximal. This portion of fascia surrounds the vagina in the female, including the large venous plexuses.

(To be continued.)

[Written for the MEDICAL BRIEF.]

Influenza's Contemporaries.

BY JOSEPH D. HARRIGAN, M. D.,
New York.

Thousands of observers have written upon the subject of influenza, that inexhaustible field for conjecture, and yet, if no change of direction of the mental activities eventuates, the list might continue to many thousands more, with the mysteries surrounding the dread visitor's approach, still unsolved.

Although the remarkable phenomena that have, from time to time, accompanied the various visitations of influenza, been faithfully recorded, and a connection between them been duly acknowledged to exist, one great oversight seems to the writer to have been committed by various observers.

It has consisted in this, viz.: The attempt to ascribe to *the phenomena themselves* some connection, whereas the *cause* of these phenomena should have been the proper matter to have come in for thorough investigation.

In other words, it is that which is *back* of such phenomena as the blood-rains, the blood-dews, the brick-rains, the fire-rains, the ill-smelling fogs, etc., which must furnish us with the clues to the cause of influenza, and the whole family of plagues.

The relationship of influenza to these phenomena of history is about as interesting a study as one could possibly occupy one's self with.

Professor Theophilus Thompson wrote, in 1852:

"We are indebted to Ehrenberg for some remarkable illustrations of certain phenomena, once supposed to rest only on the evidence of superstitious fancy, but proved by him to have existence, and to be associated with atmospheric changes. In his work 'On the Dust of the Regular Winds,' he has made it evident that a phenomenon, occasionally noticed in these annals (Annals of Influenza), has been, from time to time, recorded under the names of dust-rain, blood-rain, blood-dew, flesh-rain, brick-rain, ink-rain, fire-rain, cosmical dust, dry fog, fog coast of Western Africa, and Atlantic dark sea, or sea of darkness, etc. Ehrenberg has shown, by microscopical analysis, that in addition to various mineral materials, such as silica, alumina, oxides of iron, manganese and copper, this dust contains various polyastrica, polythalamia and phytolitharia."

Now, instead of losing one's time over the impossible task of trying to adapt any one or more of these materials as the cause of influenza, it would seem more reasonable to investigate the causes of these phenomena, with the expectation of possibly lighting upon the actual, bona-fide common cause, if, even perhaps, it might be by accident.

In other words, inasmuch as influenza is so frequently an accompaniment of these phenomena, it is perfectly logical to infer that in discovering the prime cause of these various rains and fogs mentioned, the discovery of the cause of influenza must inevitably follow, or, at least, the road to it must be clearly indicated.

The principal and most absorbing question that should have been discussed, and the problem to have been worked out was: Whence came these extraneous materials into our atmosphere, and of what are they composed?

The excellent researches of Ehrenberg have shown the composition of the inorganic chemicals, making up the dust-rains, etc., and we know that the blood-rains, etc., are really of blood enclosed in

most delicate membranes, constituting organic, living creatures, but still more interesting and important would be a knowledge of the chemical constitution of these organisms.

Still more interesting even than the study of the composition of the various materials that can be regarded as extraneous adjuncts to our atmosphere, is the working out of the problem of the origin of these materials.

Whence do they come? Are they merely earth-born, wafted on the winds to the higher strata of atmosphere, and, driven hither and thither, finally finding a resting place once more upon that same earth from whence they sprung?

Or are they foreign visitors from some near or distant planet, driven by some mysterious force into exile in space, only to be attracted by the gigantic power of the earth's magnetism, and compelled to pay us a visit, in a manner exactly similar to the visitations of meteors, etc.?

Or is it reasonable to consider for a moment the possibility of their spontaneous formation in the higher regions of the atmosphere, exactly as the particles of ice making up the scirrhi are formed?

Finally, as the one remaining possibility, seemingly, are their formations due to the union of elements possibly present in the ether of space, with the elements that go to make up the atmosphere of the earth that is extended for many miles into that ether?

The last possibility is the only one that appeals to the writer as adequately sufficient to explain the many phases of the whole question to one's complete satisfaction.

"Nature's Laboratory" does not remain confined simply to the earth; nor is there, in reality, any boundary lines to it within the ken of man. Neither is the ether a great void space, as the visits of meteors to us clearly prove.

On the contrary, all the great facts in astronomical history give unmistakable evidence that space is crowded with effete products of combustion, both in gaseous and solid form—with all their inherent tendencies to collect in masses by virtue of not only their intrinsic attractive forces, but also by the chemical natures with which they are endowed. And, furthermore, by virtue of these characteristics, both chemical—and, as a matter of course, electro-chemical—there is absolutely nothing lacking for the formation of innumerable varieties of entirely new chemical combinations, either non-organic or organic.

In this connection it might be well to recall the experiment of Mr. Crosse of Broomfield, England, as mentioned in Beard and Rockwell's Medical and Surgical Electricity, pp. 47, 48, of which the writer has spoken in previous articles.

Quoting from the work mentioned we find that:

"Electro-chemical action continued for weeks, months and years, as was done by that very laborious experimenter, Mr. Crosse, may produce as secondary results interesting minerals, such as quartz, aragonite, malachite. During these experiments in electro-crystallization, Mr. Crosse discovered that remarkable insect, the acarus, which appeared in electrized solutions of sulphate of iron, sulphate of zinc, and nitrate and sulphate of copper. * * * Mr. Weekes, of Sandwich in Kent, subsequently repeated the experiments of Crosse by passing electrical currents through silicate of potash in glass receivers over mercury. All possible care was taken to keep out foreign matter. After a constant action of a year insects appeared, entirely similar to those obtained by Mr. Crosse."

Comparing this experiment, carried out on an infinitessimally small scale comparatively, with the vastly more extensive operations carried on for ages in Nature's laboratory, should not the results be exactly similar, only with infinitely greater results?

And these operations are going on continually, not only in the depths of the earth, but also in the atmosphere that extends for many miles towards space.

We well know that this atmosphere is surcharged with electricity. We know also that, basing our knowledge upon Ehrenberg's discoveries, this atmosphere is laden, at times, with all the materials that make possible the creation of both inorganic and organic matter.

There are present similar chemicals, exactly as in the experiments above-mentioned, as likewise the electricity necessary for proper fusion, if one might call it so, prepared by the Creator, simply awaiting His word for the consummation of His wishes, the ultimate result consisting of the formation of organic or inorganic matter, altogether dependent upon the Creator's bestowal of or withholding of that inestimable gift called life.

The conclusion must force itself upon us that wherever the proper chemicals are present, and the proper welding force, if one might term the electricity that goes to make up an indispensable part of the operation, there can be, in the nature of things, but one result, a chemical combination, either inorganic or organic.

It is but a step from inorganic to organic being, just as *vice versa* it is but a step from life to death, and the experiments carried on in the laboratory by Mr. Crosse and Mr. Weekes, conducted under conditions insuring the utmost accuracy scientifically obtainable, prove beyond the question of a doubt that it is merely a matter of chemicals and electro-chemical action, by means of which, with the permission of the Creator of all things, these various transformations are brought about.

It will be recalled that in Mr. Crosse's experiments, it was whilst he was developing inorganic minerals, such as quartz, arragonite, malachite, etc., he accidentally discovered the organic chemicals called acari.

This would seem to indicate that in all such electro-crystallizations, both organic and inorganic chemical transformations go hand in hand.

In other words synthetical chemistry is not by any manner of means confined to the inorganic chemical world, but embraces in its scope the organic world besides.

The Great Omniscient simply utilized the chemical laws which He Himself had instituted, and after creating the earth, made man out of its slime (in a word, its chemicals), to enjoy it.

Now, it is not surprising to find that Professor Ehrenberg, in his researches above-mentioned, discovered organic as well as inorganic constituents of the dust and air.

There is ample justification for the theory that these organic constituents sprang into existence contemporaneously with the inorganic formations.

Numerous and intricate operations productive of innumerable effects must certainly be expected to be constantly transpiring in the atmosphere, as well as in the earth, and of these, organized materials, must, almost of necessity, be a part.

Now, it is a fact that the organic materials in the Crosse and Weekes' experiments developed from electrized solutions of sulphate of iron, sulphate of zinc, nitrate and sulphate of copper, as likewise, silicate of potash.

But, according to Professor Witthaus, as likewise Professor Ehrenberg, as already mentioned, and many other scientists, the air is laden with most diverse varieties of chemicals, among them the chemicals of the Crosse-Weekes' experiments. We are also aware of the presence of electricity, in greater or less quantity.

At different times this latter constituent is in far greater abundance than usual.

Now, if, for the sake of argument, it were admitted that these organic and inorganic materials found in the atmosphere sprang into existence from the union of various chemicals present therein, we would expect to find the process almost constantly transpiring, provided, of course, the chemicals were earth-born.

But history tells us that they are periodic in their visitations, consequently we must seek in space for the chemical ingredients that go to make up the complement, the earth doing its share towards the destined end.

Just as we have periodic visitations of meteors, and their spontaneous combustion in our atmosphere as they approach the earth, we must expect to have visitations of the gaseous chemical materials, coming to us through space from similar points or foci of combustion from which the meteors had their origin.

And similarly to these meteors, a chemical combination is formed with the

chemicals of our atmosphere, the result being extremely variable, increased amounts of electricity as one effect, formation of inorganic chemical combinations a second, and last, and most important of all, the formation of organic matter.

Just as the meteor, in its passage through our atmosphere, develops spontaneous combustion, so the various gases, products of the great conflagrations that have raged in past ages in space and still continue to rage, and which must be encountered by the earth, perform their part, an extremely varied one—so-called spontaneous development of life being the principal and most important.

One seems to be as much justified in considering that the great edict of the Creator's: "Let there be light," held good merely for some remote period of time, ages and ages ago, as the still greater command of "Let there be life."

We see fresh life springing up all around us, every day and every hour, and it certainly seems reasonable to expect to find (so-called) spontaneous generation eventuating wherever and whenever the materials necessary for its production are present.

Thus it is easy to see how, with the lightning flash (an example of spontaneous combustion), not alone are inorganic chemicals, such as nitric and nitrous acids in combination with ammonium produced, as likewise many other chemicals, but even organic chemicals are also produced.

We poor mortals are accustomed to speak of the creation as having happened in some remote time, ages ago, and as having been, ages ago, completed.

We forget that, with the Creator, it is one eternal day—always the everlasting present.

The creation was begun in what, to us, is past time, but it is also continuing in the present, and extends from the highest forms of life down to the lowest.

What might seem a miracle of the laboratory, in the Crosse-Weekes' experiments, is as nothing to the overwhelming miracles constantly permitted by the Creator to be witnessed by us at all times in Nature, new beings springing into existence always and ever.

Now, one might inquire, what connection, providing this is all true, exists between these organic and inorganic materials and influenza?

Simply this:

They serve to indicate the presence in the earth's atmosphere of chemicals inimical to higher forms of life, but extremely favorable to the development of the lowest forms.

There is an in-balance of the chemical and electro-chemical adjustment of the atmosphere altogether in favor of lowest life development, and *per contra*, productive of disturbed nutrition in the higher forms, hence epidemic disease—exactly like the in-balance of chemicals in the food supply that disturbs the nutrition of the tissues, and produces the disease known as scurvy.

Hence it is not the material products of this in-balance that are, in themselves, to be feared—althqugh, secondarily, they may, no doubt, cause trouble enough—it is the in-balance itself that works the mischief.

Where the lowest forms of life find easiest development, there higher forms can not thrive.

Rather than place the blame for disease engendered, for example: in the damp atmosphere of a cellar, upon the low forms of life developed in that cellar —whether those forms of life are worms or germs, it would seem far more logical to seek the cause in the chemical and electro-chemical in-balance that certainly prevails there, and that must be reckoned with, as justifiably as is the reckoning of the in-balance of the chemicals of our food.

An in-balance of the food chemicals produces disease, *e. g.*, scurvy, as noted. Where many are attacked at or about the same time it means an endemic or epidemic, as the case may be.

Similarly, an in-balance of the air chemicals also produces disease, which is usually endemic or epidemic.

Thus it is with influenza.

Clearly and unmistakably caused by the same in-balance of the earth's atmospheric chemicals, it is not at all surprising to find it accompanied, at times, by such formations of lowest organic materials

as make up the blood-rains, blood-dews, moulds, etc., spoken of in history.

There appears to be but one logical conclusion to be deduced with regard to these contemporary phenomena to influenza, viz.: That they are but companion effects.

A common cause for both exists and is to be found in the in-balance of the air chemicals.

Taking into consideration the periodicity of these phenomena as well, also, their unversality, we must seek in the earth movements through space for a cause.

Inasmuch as the earth must, in its career, run into huge volumes of gaseous chemicals, products of the great conflagrations of space, just as it runs, at times, into the more solid products, as evidenced by our meteoric displays, it seems logically certain that we must look to these gaseous chemicals as the causative factor in the chemical and electro-chemical in-balance that without a particle of doubt prevails.

All nature participates in this in-balance.

Witness the furious storms as recorded in history.

Note the great (natural) famines.

Observe the great increase in the lowest forms of life at the expense of the highest forms.

This development of lowest forms of life is not confined or restricted to any particular place or station.

It goes on in the air, on the earth, or in the waters of the earth. In the animal or in the plant—there also does this in-balance cause new development of lowest life. Wherever the chemicals can penetrate that, with the aid of their inherent electro-chemical action, produce this in-balance, there will new forms of life—call them germs or what you will—eventuate.

Thus, the germs found present in the body in influenza can no more be regarded as the cause of the disease than the blood of the blood-rains, or the strange moulds that have, at times, prevailed contemporaneously with the disease.

They are simply products of an in-balance in nature favorable to them, but wofully unfavorable to man.

668 Lexington Avenue.

[Written for the MEDICAL BRIEF.]

The Bible and Morality.

BY R. C. CAVE,
St. Louis, Mo.

It is said by some that, if men were to lose faith in the Bible as a divinely-inspired revelation of truth and duty, the bulwark of morality would be gone, and society would be in a state of moral anarchy. They seem to think that, unless men regard the moral law as peculiarly divine in its origin, they will feel under no obligation to obey it, and will, forthwith, proceed to break every commandment in the Decalogue. But those who take this view of the matter will hardly admit that *they* would become liars, thieves, and libertines, if they were not restrained by commands given directly from heaven; and, if they can free themselves from the notion that they are made of superior clay, they may be able to see that such commands are not necessary to hold others in the paths of truth, honesty, and good conduct.

The history of mankind clearly shows that man is not dependent on the Bible for either the knowledge or the practice of morality. He is not indebted to any divinely-inspired book for his ideas of right and wrong. He gradually gathered knowledge of what is right and what is wrong from experience, and the knowledge thus gathered was written down in books which afterwards came to be regarded as divine. As far as it relates to morality, the Divine Book merely inculcates that conduct already shown by experience to be wise and good. And we find that men who knew nothing of our Bible gave precepts for the regulation of conduct which compare most favorably with the best teaching of Hebrew prophets and Christian apostles. Confucius taught, in other words, the golden rule, which Jesus declared to be "the law and the prophets." Those who have searched the records of ancient Egypt, tell us that, in the rules regulating the social life of that people, "none of the Christian virtues is forgotten." It has been said, and is probably true, that Moses, in giving the Decalogue, merely formulated principles learned from the Egyptians; and

every moral duty enjoined by the Decalogue is enjoined with equal clearness and force by the Buddhist scriptures. Pages of the BRIEF might be filled with quotations from the literature of people who never heard of our Bible, but who, nevertheless, had moral precepts of the highest order. Such quotations clearly show that man is not dependent on our Bible for moral instruction.

And history shows that faith in the Bible as a divinely-inspired revelation of truth and duty does not make men more moral in conduct. Other things being equal, those in "heathen darkness" have been no more immoral than those who have had the light of the Bible to guide them, and the authority of the Bible to restrain them from evil and impel them to good. If we may believe what their prophets say of them, the Jews, "unto whom were committed the oracles of God," were no better than their neighbors. Ezekiel mentions, among the sins of Jerusalem, the lack of respect and reverence for parents, the oppression of strangers, the "vexing" of widows and orphans, extortion, bribery, incest, and murder. Jeremiah said of his people: "They be all adulterers, an assembly of treacherous men, and they bend their tongues, like their bow, for lies. * * * Every brother will utterly supplant, and every neighbor will walk with slanders." The moral state of those who did not have the "oracles of God" could not possibly have been worse than that thus described. Turning to the history of Christians, we find that they can rightly claim no very great moral superiority over the adherents of other religions. The moral conduct of the disciples of Budda, Confucius, or Mohammed, could hardly ever have been worse than that of even the rulers of the church, in the tenth century, "who," as Mosheim tells us, "indulged themselves in the commission of the most odious crimes, and abandoned themselves to the lawless impulse of the most licentious passions, without reluctance or remorse; who confounded, in short, all differences between just and unjust, to satisfy their impious ambition; and whose spiritual empire was such a diversified scene of iniquity and violence as never was exhibited under any of those temporal tyrants who have been the scourges of mankind." And, since history thus shows that men with the Bible have been just as immoral as men without it, I fail to see how it can be rightly called the bulwark of morality.

And, even if faith in the Bible as a divinely-inspired revelation did make man more moral in conduct, it would not make him more moral in reality. True morality consists not in the conformity of the conduct to a rule of life commanded by some outward authority, but in the conformity of the character to righteousness, so that what is seen to be right will be done, whether an outward authority commands it or not. The man who would steal, if the Bible did not forbid theft, is a thief at heart. He is rotten at the core. And so, in every case, the morality which consists in obedience to the Bible as an authoritative revelation, and would cease to exist if the Bible were not so regarded, is spurious.

3928 West Belle Place.

[Written for the MEDICAL BRIEF.]

Race Suicide.

BY J. A. HOUSER, M. D.,

Author of "Is Marriage a Failure?" "Knocking at the Gates of Hell," "Beautiful Woman," "Zenda," "The Spirit of Life," etc., etc.
Indianapolis, Ind.

Race Suicide.—The human family had its origin, like all else of animal life, in cell structure, and developed upward to its present condition. What this condition is, as compared with the stages of the past, is not hard to decide, but what rank it may take when compared with the future, is a matter of conjecture that each must settle for himself.

The optimist can easily persuade himself that the race will go on to perfection, physically and morally. The spiritually-inclined can see it evolve into a race of immortals with the coming of the millenium, while a pessimist sees the human family on the down-grade toward its primitive state. Each of these views arises from sentiment rather than from a basis of physical facts. Any course, continued unchanged, that a traveler may take, will bring him to the place from which he started. This seems true,

also, of the forces of nature and all they govern. From this view of man we must conclude that he will return in his rounds to his origin.

The very fact of a beginning carries with it the evidence of an ending. That which is endless is without a beginning. To even permit the suggestion to enter the mind that man's sojourn on earth has its limitations, set by infinite forces, is a tragedy oppressive and awful. It takes the thinker to contemplate a voiceless and barren world. As unpleasant as such a conjecture is, it has at least two avenues by which it may come; one, the changing of the race until it will no longer reproduce its kind, and the other, the cooling processes of the earth until the temperature shall preclude all animal and vegetable life. In this case, the human family, with all other forms of life, will wrap the mantle of eternal snows about it and lie down to the slumber of an everlasting winter.

But it is my province to speak of the race as hastening its end by some act of its own rather than by the course of climatic events. The first act of life is to multiply, the next to enjoy, and the last to think, if we are content to divide it into three stages. Either of these carried beyond a certain, though not a well-defined, point, unbalances the conditions that give and maintain an equilibrium, and robs the others of their power.

This compensation is everywhere present in the constitution of matter. It is the way some infinite force has to shape the ends of nature. It may be God's way to retain His throne in the world of matter.

In every living organization, if any part receives more than its share of the vital power, it is at the expense of the rest. The oak tree will serve as an example in the vegetable kingdom. In the cleared field, where the solitary tree is spared by the destroying ax of the woodman, the sun stimulates the lower limbs to a greater growth. Their vigorous life soon drinks up all the sap, the blood and life of the tree. The topmost branches get little and less, become puny and wither, and death draws his line of demarcation just above the healthy bough, and all above that is dead.

In the human forest this analogy holds good. Many a man uses up all his life force in the development of his muscles, and, like the oak, dies at the top first. He is a great, strong animal, but so weak mentally that he has but a child's mind to direct his bodily exertions.

So the brain may be developed until it uses all the vitality belonging, by right, to the other parts of the body, and bring weakness, disease and death. Too great development of the brain and the nerve centers is at the expense of the vital forces, and especially the reproductive powers, and ranks as a cause of race suicide.

An example is found in the excessive development of one part of fruits. The apple, too greatly developed, has but rudimentary seeds, or none at all. So with the pear, strawberry, or any other fruit or vegetable unbalanced by over-development. But the apple, uncared for, goes back to the primitive seedling.

Man, developed mentally beyond a certain point, becomes barren. He is a semi-psychic, mentally-spiritualized being, but lacks the power to transmit his life. He is often exalted, transcendant, but not physically transmittal. He is seldom great, intellectually, but a few examples, scattered through the past, mark epochs in the history of the race. Charles Sumner and Wendell Phillips are illustrious types in our own country. They inherited great mental powers and patiently developed them until their lives were transformed into the spiritualization of humanity. Thoughts carried them above the tempest of the blood. They left the world the best of mind, but no reincarnation of themselves in the person of a child.

It is said that Wendell Phillips' wife sought him in marriage that she might have the honor and glory of bearing a child for the chief champion of human liberty, but she learned, later, that she had wedded a great soul who transmuted his animal life into the beatific glory of the mind, and had none left to transmit to another.

Had Charles Sumner been different in body and less in mind a certain Russian official, accredited to the United States, might not have been returned to St. Petersburg.

Below these illustrious examples of sterility, because of over-development of the mental organization, there are thousands whose chief point of mention is their inability to obey the first command the race received from the Creator. I speak of man, of course, in the generic sense, referring to the males first. But the education of the mental to the exclusion of the physical, shows far more effect upon the women than upon the men. For every sterile man there are six barren women. It is rarely they show any great mental genius, but rather lack of vitality. They are undeveloped as women. A few are masculine in their tastes, and coarse in their natures. But the great majority are refined to the point of unnatural sensibility. Pure, chaste, hysterical, spiritualized, delicate, weakly women; the prey of morbid hallucinations, dreamy, soulful fads. Early in life they are shocked at nature's processes, and are, later, irritated because humans are animals.

These women are undeveloped as women. Their sexual system is infantile. At eighteen or twenty they are children sexually. That influence on life from a healthy, vigorous generative system is absent, and the whole character is out of balance. They frequently form a sentimental attachment for girls, dolls, pictures, and certain books of a weak and sterile sentiment. They are never heroines; they lack the force and courage of gender. Though frequently married, they are never wives. They are wedded disappointments, but less so than their male counterparts.

The life and education of girls invite this cause of race suicide. Some reproduce, occasionally, through long-divided periods. The offspring of such have little to thank their mothers for, nor that little long, as their allotment of life soon runs through the hour-glass which contains it. The husbands of these weakly, undeveloped women are the unfortunates of disappointment and temptation. Though married, they have no wives, except in name, and are thus barred from other society and a more successful marriage. Foiled in the legal union, they seek illegally what they failed to find by law. They are met more than half way by the disappointed wife of another, who has found marriage a failure in providing her a home and support. If he does not find the suitable companionship in the wife of a failure as a husband, it will be in some single woman who ought to be married. She, weaker in mind than in gender, seeks to gain at least some of the pleasures, out of marriage, that every woman should have the opportunity to find in it—companionship and support.

It is very rarely that a manly man transgresses in marital affairs without some serious incompatibility at home. An honorable woman never does so. But when those who expected to find an Eden in marriage waken to the fact that they have gained only the possession of a barren desert, swept by the storms of discontent, it is quite likely that they will be tempted by forbidden fruit. As the starving seek food, the freezing fire, so the empty life seeks to fill the void.

But these mismated marriages swing open the doors of temptation and furnish a thousand causes for hypocrisy.

Love is the honest guide for the girl, the financial recourse for the widow, and the mask for the deceiver.

The storms of passion, unchecked, wreck more than the storms of the sea, and the flat of virility often taints one life to save another.

Birth gives every maiden the jewel of virtue, but her will and conscience must be the key to the casket.

When a girl is born the gods alone can foretell her destiny, but the fates may even fool them.

The love of the heart and the hope of the soul are only too often the slaves of the instincts of nature.

Schools should educate girls in a threefold way, physically, morally, and intellectually, and prepare them to be good wives and mothers.

A great nation must have a great mother.

Girls should attend schools for girls only, that the physiology pertaining to human life may be taught. In a mixed school Dan Cupid is usually master, and what he teaches is often indelicate and unprofitable.

Strong, healthy and sincere wives are the evangels to save the race by saving their husbands. They need not seek missionary work in foreign lands. They can marry and begin at home. God would hardly send a woman thousands of miles away to waste her energies on a helpless yellow Pagan, when a far better or worse man across the street needs her attention.

Prevention.—Limiting the number of offspring by artificial means, I am aware, is a delicate subject to write about, but as it has greatly to do with both the adults and the unborn, and many that should be and are not born, I shall defy the morbid sensibilities of those whose only virtues are found in feigned ignorance and assumed purity.

To discuss something of which everybody knows who has reached the age of puberty and reason, is revealing no painful facts. If anything is evil to the race, or hurtful to a number, the fact justifies the discussion of the subject.

It would be futile to say anything unnatural is harmless, and in this case incalulable harm may come, both physically and morally. But to say that everything that transcends what we usually consider the bounds of natural laws, is sure to bring death, or even harm, would be far from fact. Indeed, it is not an easy matter to say, definitely, where nature stops and art begins, in the conditions of human life. In the strictest sense of the term, there is no purely natural life lived by a human being, or even a domestic animal. Nor would the creature attempting it long survive. The natural man would be naked, live out of doors, and eat uncooked food; for all these things make up life of art protecting nature. So is the barn for the horse and cow, and other domestic animals. In short, life in this climate would not long survive without the aid of art. In a sense, this need not be unnatural or hurtful. So I will differentiate by saying only the hurtful is unnatural.

A person may live the simple life and still have the benefits of art, the house, clothing, cooking, and all else of civilization.

Many means resorted to in limiting the number of children are hurtful, as every physician must know and guard against. But the doctor's opinion is, usually, considered an argument for children, as he may get fifty dollars for an obstetric case.

The sermons on cheating nature are heard with reverence and silence by the laity, but, like most preachments in many directions, forgotten until heard again. Then the minister may have such a small family himself as to lessen the force of his argument. Sometimes the listeners do more thinking than the talker.

With all the talk on this subject, and without spoken opinion against it, the stork is shooed away, and when he obtrudes his presence with his gift, he is not always welcome.

Once, while on a lecture through the West, it was my lot to spend Sunday in a Missouri town. The landlord of the hotel asked me to accompany him to church in the evening. When we entered the church I saw, to my surprise, a congregation of colored people, and a fine specimen of darkest Africa in the pulpit. Seeing my surprise, my friend assured me he had made no mistake in seeking the place of worship.

"That old man," he said, "preaches tonight on President Roosevelt's pet theme, 'Race Suicide.'"

I was interested. During the sermon the sable orator hewed to the line and spared not. He said: "Dar am sumfin wrong wid dis hah church. Here am big, strong married folks, who have been married years, and not a pickanniny in de house. Why, look at yo' ol' hen. Ebery spring she hatches huh brood. Go thou and do likewise!" At this juncture an old colored mammy, noted for her children, that numbered in the 'teens, arose amid a dead calm, and said: "Mistah Johnsing; I wants to say a wo'd. I'se tried de hatchin' and advise against it. Dat ol' hen don' hab to tak' in washin' to get calico for huh yong 'uns."

If Brother Johnson could have insured support for the children, so they would not be a burden to the poor parents, his sermon would have been effective.

The question of children resolves itself into the phrase, "fewer and better." The

strength of the nation is not in numbers, but in kind. The parents who bring more children into the world than they can properly support, educate, and care for, are criminally unwise, if not cruel and barbarous. It is much like confining five sheep where there is pasturage for but two. Two live and three die. While the superfious children, born to parents who could properly support them, do not always die physically, want robs their little, growing bodies and filches from their minds the opportunities for mental life, while privations may lead them to moral death. Were it not for the pinch of poverty and claws of want, many a boy would not have contemplated the mistakes of life behind prison bars, nor his sister passed into the night of shame that has no dawn. Let the beasts thoughtlessly cast their young upon the bosom of nature, to struggle and succumb, but not man. He should think beyond the passions of the flesh, and not curse a child with misery to satisfy an animal instinct. The rule of the married should be to invite no guest until they can be entertained; no children until they can be cared for. To do otherwise is to confess the animal stronger than the human.

If a man toils with his two naked hands to support a wife and family, he fights the bravest battle that is waged on earth, the battle of love. No honor awaits him, no high office beckons him on. Bent, like a beast of burden with daily toil, he struggles to fill little mouths and shoe little feet. He is my hero, and, I think, the bravest and noblest of our kind.

But what must be his feelings when he realizes he is raising some little white slaves, to toil for masters as he has toiled? He struggles and multiplies, and gives his children to the insatiable jaws of greed.

No state is civilized which permits a condition that gives one man as a slave to another. The combinations of incorporated business have robbed the child of his birthright before he was born, and doomed him to servitude. These combines have taken the necessities of the world, the coal, timber and metals, and finally are getting the lands, and, aided by unjust laws, command the State to enforce their edicts of slavery. This is done, largely, by the aid of the United States Senate, whose members often grow fabulously rich through the graft of corporations and trusts.

If the prisons had their dues the Senate would likely fail to act for want of a quorum.

During the last financial panic I happened one day to be in a dining-car where there was a millionaire Senator, reputed to be the friend of railroads and express companies. The dinner cost a dollar. It was a rainy, cold day. Looking out of the window I saw the section hands rush to the track to work as soon as the train passed. These poorly-clad, wet and cold men received ninety cents a day for labor. Slaves on the steppes of starvation, whose day's wage was less than a meal cost on the train. They, doubtless, were raising boys to be slaves of the same corporation. And yet, we say, "the land of the free!" And then, in the same breath, ask the Lord to forgive us for lying.

When I contemplate the condition of the daily toiler, I do not wonder at his fear of a large family, nor do I blame him for limiting it to the conditions of his income. Let the children of the toiling men and women be few in number and free in body. If toilers, parents, lack the necessary knowledge in this direction, they should consult the "smart set" on Easy street.

Abortion.—Abortion is the most widely-spread and frequently-committed form of murder in civilization. It is the unchristian way that Christian people have of limiting the human output. Bad as this mode of child-murder is, it is at least less shocking than the former means of the Pagans and heathens of India and China had to reach the same end. I think most of us, if we had to choose between prenatal death and a meal for a crocodile of the Ganges, or the baby tower of China, we would not be long in favoring the first. If Western civilization succeeds in persuading the heathens of the Orient to turn from their ghastly and heartless social economy, it will, at least, save the public's feelings. But for every child given by these strange snuffers of infantile candles hundreds, possibly thousands,

at an earlier stage of existence yield up their lives to the instruments or drugs of abortionists. If the United States census could give the number of abortions, the figures would be so appalling that they would make the people doubt their civilization, and question their conscience.

The figures of prenatal murder would, doubtless, surpass the birth-rate. The records of thirty-five women, scattered through the Middle West, as my history shows, gave birth to seventy-four children, while there were eighty-nine abortions.

Though in every community and practiced by all classes, abortion is not the crime of the poor as much as of the rich. Nor is every woman guilty in every class, but such a great number are that it may be called universal throughout the civilized world.

The women guilty of having their children murdered before birth have committed a great crime. They seem to think, or at least assume, that the earlier stages of embryonic and fetal life do not represent human life as at birth, or even after the fourth month of gestation. With some religious people there is a belief that the child has no soul prior to a certain undefined period, and to destroy its life is not, therefore, murder. When religion, as in this case, does not square with science, it leaves its votaries in a maze of superstition, and not always capable of choosing right.

Unfortunately for many of us, the ignorance of youth frequently becomes the faith of maturer years, and when the strength of reason is most needed we have but the timidity of doubt, and the weakness of superstition to lean upon.

By far the greater number of abortions are committed upon married women, possibly ninety-five out of each one hundred. This is because of their still greater predominance in numbers. It is also true that nearly all the illegitimate pregnancies are aborted, while in the neighborhood of half the legitimate gestations are permitted to take their natural course.

While married women have less reason for turning murderers than the unfortunate, wanton or deceived girl, the almost certainty that the affair will remain a sacred secret with the doctor, and all interested parties, leaves little to fear from the law.

This same assurance gives the morally-depraved medical man a chance for a good fee, with the danger attending illegal practice removed. Even if his patient die, she would not be permitted to make an *ante-mortem* statement, and the husband has too much at stake to permit awakening of conscience at such a late hour. It is these conditions that so hedge about the crime when committed at home by the married that gives immunity to abortionists, and defies conviction.

There are families, and not so widely scattered either, in which a physician can not hold the practice if he refuses to commit infantile murder. Be it said to the everlasting honor of one of the world's greatest professions, that the number of abortionists among physicians is much less than is commonly supposed, though greater than it should be. Indeed, one abortionist in the more than one hundred and thirty thousand physicians in America would be one too many.

Many of the laity seem to think that all physicians are abortionists, and readily commit murder for the asking. This view arises mostly, I think, from the opinion, before referred to, that it is no crime, early in gestation.

It is nothing uncommon for some verdant, but unfortunate, female, alone, or with a male companion, to make the round of doctors' offices in a city, looking for a man willing to commit a murder for almost any price, and very much surprised when met with a positive refusal at most places. They seem to think the doctor has a cheap "hand-me-down" lot of abortions, ready for sale at cut-rates.

Country people share this misconception of city physicians' lack of morals to an astonishing degree. Perhaps this is in companionship with their neighbors' opinion about city people in general.

A young woman recently made the rounds of doctors' offices in this city, and was astonished at being refused what seemed to her such a small request as performing an abortion.

Once, when asked by a married woman what I would charge to abort her, I

frankly replied, "three million dollars." "Heavens!" she exclaimed, "Dr. (giving his name) has done the work for me three times, and charged me only ten dollars the first and second times, and five dollars the last time. I thought that pretty steep, but," she continued, "he belongs to our church and wanted to do what was right in prices." I assured her the price I asked was as cheap as I could afford for a life sentence in the penitentiary, and a much longer term in hell after that. She informed me that she did not believe there was any wrong in abortion, and was confident that any doctor would do the work if he were not a coward, and then flounced out of my office.

Left to meditation, I concluded that I would rather be called a coward by a simple, morally lop-sided "female creature" than to be pronounced a murderer by twelve "good men and true" in a jury box.

Surgery and Race Suicide.—The surgeon's knife has done its share in lessening the birth-rate in this country and Europe, France having suffered, perhaps, more than any other European country. Whether this country is surpassed, in this respect, by its sister republic across the sea, is open to debate, since we have no reliable statistics on the subject, as the French have. It is claimed that within the fourteen years, ending with 1900, five hundred thousand French women were rendered barren by the surgeon's knife. This number, if correct, carries with it evidence of heartless and reckless butchery. Perhaps not more than one-half of this number needed the operation, and a considerable number died from the effects.

Of all European physicians, the French doctors are the most daring and reckless. They often cut for the love of cutting. If the women operated upon had attained an average age of thirty years, they would lose fifteen years of productive life. At the rate of three children each, from the time of operation until forty-five, the usual time for menstrual cessation, there would be a loss of one million five hundred thousand babies that were never born. Though this is but a very crude estimate, as many of the women subjected to the knife were, in all probability, incapable of bearing children, it still accounts for a sufficient falling off in the birth-rate to help explain why the death-rate in France has passed the birth-rate, making a greater demand for coffins than cradles.

In America, surgery has run riot for twenty years, and outstripped the world in recklessness and daring. This is the age of ripping women up. It is the discovery of a supposed incurable female disease, then chloroform, the knife, and the coffin. Some years ago it was a neck-and-neck race between the divorce courts and numerous sanitariums as to which would relieve the most women of husbands, or the need of them, with Dakota and Chicago in the lead, pushed hard by New York, while Philadelphia brought up the rear, with the only awakening since the cracking of the Liberty Bell. Accompanying this tripod of destinies shaping human ends, and separating the quick and the dead, are a number of lesser satellites which claim attention. But long since the operating table has outstripped the bench, leaving society more physical than matrimonial wrecks.

While these operations are often needed, it is patent to all physicians that they are resorted to entirely too often. Perhaps the fees accompanying them are potent arbiters in influencing the use of the knife.

The thousands and thousands of deovulations mean a proportionately less number of births.

Since the great majority of women who undergo this operation are of the socially better classes, in education and wealth, the decrease in the number of children is largely from homes where they could be best cared for. Other parents, whose opportunities for the proper rearing of their offspring are not so good, will continue to produce the usual number. This class, from the respectable poor to the slum element, dominating society, must, necessarily, have a great influence, and that not of the best. The only agreeable side of this problem may be found in the fact that the vigorous classes, many of foreign birth, will have most of the children, insuring a strong, healthy population for future years.

The weakly, sickly women, whose inert childhoods retarded development of the vital powers necessary to womanhood and motherhood, failing to produce their quota of children, withhold just that much of weakness and disease from the assets of the sum total of American citizenship.

Life, Atomic.—The life of a living body is one part of it, and drawn from the great world of life, the body is taken from the world of matter. This is not obvious to the senses, but real to the understanding.

I can not get away from the belief that life is an atomic substance. Shall I say some form of matter we do not understand, since we can not see, weigh, nor measure it? It has intelligence, motion, and the quality of sensation used in matter. It bodies itself forth in organization. It has the power and wisdom to build itself a house out of coarser matter. It first makes but one little machine, a cell; then multiplies itself and multiplies its little machines, the cells. This it does by adding another life atom and then dividing the parent cell into two cells. Thus it draws both the spirit and matter from two worlds and builds them into a living house. It is the spirit life we receive that shapes, forms and directs all life's actions. This obtains in the first cell, built by the little spark of atomic intelligence, to the full stature of man. The beginning of human life, in its embryonic form, is when two spirit specks unite and begin building up a form to body forth another life.

Billions and billions of these forms of cell-life are produced by the living male and female bodies that never unite, and, like other disengaged atoms, take their place in their own world. It seems probable that all space is alive with life-atoms, ever flowing out from the great center of all life.

As the amount of energy is always the same, though ever changing, and all comes from the same source, the sun, so, probably, the amount of life is fixed by as immutable laws as those governing energy, and comes from a definite, fixed source. So a human more or a human less means nothing except to himself, his joys or sufferings, and the effect upon those about him. If the matter of his body had never been held in a living form, just a little more would have been somewhere else, as it will be when chemical force gains the mastery over vital force, and the "wheel of life stands still."

So with the spirit-matter that fills our earthly bodies. Had it not tarried in this form it would be part of the infinite measure somewhere, as it may be soon. Yet a little while and what we are will be what we were a little while ago. But, it may be; I want to believe, I do believe, that the association of the life quantity we have becomes personified, individualized, and maintains its personal identity forever. If this be true in physical change, the two forms of life, those which are, and those which have passed beyond, will converge until they meet on a common plane. This is but the suggestion evolution would make for life. To thus complete the journey would not be so marvelous as the journey already taken. It would only be a world with all it contains, evolving from the terrestrial to the celestial. Perhaps more than half this journey is already finished.

From a lifeless, pulseless night, the whispering voice of creation awakened the world to life and its onward march. In the recorded pages of creation we trace the footprints of life upward from the depths of slime and ooze to the glory of humanity.

But yesterday, in geologic time, the beautiful, feathered songster of the air was a serpent, and man a beast. The space between them now and then is less than the measures that reach on to touching of hands, and to hearing songs from other lips tuned first like our own; who knows?

After all, life is a little of the infinite spirit working in clay. After awhile it may not need the vessel.

To view life, its beginning and ending in matter, is to give creation no credit for intelligence, and to presume a Creator working without design.

(To be continued.)

[Written for the MEDICAL BRIEF.]

Poison Oak or Ivy.

BY SILAS HUBBARD, M. D.,
East Aurora, N. Y.

A California subscriber requests that some one will write on the above subject. I agree with said subscriber that there is considerable poison ivy in the mountains of California, which I saw three years ago and also heard a number complaining that they had been poisoned, though I saw none of the poison vine in the valleys; I suppose on account of the valleys being so dry, and needing irrigation. Poison oak and poison ivy are two different things in appearance. The poison oak is a shrub—maximum height from ten to fifteen feet; the green berries on it mature in the fall, and remain green upon it all winter. It resembles, in leaves and bark, an ash sapling, and grows in swamps. By contact with it, it communicates the same kind of poison that the three-leaved ivy does. The cure for both is the same. Prevention is the best cure. Every person ought to be instructed to recognize both, and beware never to come in contact with either. The poison ivy is far more abundant than the poison oak, and therefore is far more dangerous. Both of them grow in every State of the Union. In a semitropical climate like Southern California, they are more poisonous and dangerous than in more northern States. In breaking the stems or leaves of the poison ivy a milky juice issues out, which is the most concentrated part of the poison. The tincture of the green leaves is the part used for medicine. A drop of it rubbed on the back of the hand will there produce dermatitis. A drop of the tincture, well diluted, taken three times per day, sometimes cures rheumatism, also some kinds of cutaneous eruptions, etc. When a person has been poisoned by coming in contact with poison oak or poison ivy, the poison does not manifest itself short of fifteen or twenty hours; then a violent epidermatitis sets in, with swelling and redness, and great tormenting itching, especially between the fingers and toes, and wherever the skin is the thinnest. One writer on the Pacific Coast said the poison oak and poison vine had microscopic thorns which penetrated the skin of the victim to produce the poisonous effects. I do not believe it. I believe the poison is an oily acid substance, and to get rid of the oily acid substance I advise the patient to bathe and wash much and long in hot water, as hot as he can well bear, which liquefies the oil and enables the patient to get rid of it much better than to use cold applications recommended by some; for cold applications and lead congeal the poisonous oil, and thereby retards the cure. A hot infusion of sweet clover with a little sulphate of zinc or bicarbonate of soda in it would be better than pure hot water alone to bathe in, for the soda would saponify and neutralize the poisonous acid oil, and help mightily to get rid of it; or to bathe much and long in hot non-irritating soap water would be an excellent cure. I find by these modes of cure the worst cases are cured within a week.

Some people are immune to the effects of the poison. Some people are poisoned if they go in the field where it is, even though they touch it not. I suppose the poison is conveyed to them by insects which infest the vines and shrubs. I wish every State would pass laws compelling their people to exterminate the poison oak and poison ivy.

BY S. C. MITCHELL, M. D.,
Sedalia, Mo.

Tell your California subscriber to try crystallized carbolic acid, one drachm, and add sweet oil enough to make three ounces. Mix and apply three or four times a day. This is also a good application for erysipelas or small-pox.

BY S. J. SMITH, M. D.,
Lincoln, Neb.

Your "California subscriber" will find hydrochlorate of ammonia, one or two drachms in a pint of water, effectual, cleanly and odorless in ivy poisoning. Apply freely.

After testing many things I find this superior to any other remedy.

322 W. Nineteenth St., University Place Sta.

BY R. W. BOWER, M. D.,
Sheridan, Ill.

In the October number of the BRIEF a California subscriber asks for best treatment for ivy poisoning. In its first stages I use sweet spirits nitre and sugar of lead.

℞ Spts. Ætheris Nit. Dol. .....2 ounces.
Plumbi Acetas.....2 grains.
M. Sig.: Apply freely over affected surface with soft cloth every hour or two till itching and burning sensation ceases.

If poisoning has run on for some hours, or even days, before seen, I advise:

℞ Pure Soft Water.....1 pint.
Fl. Ext. Grindelia Robusta .....4 drachms.
M. Sig.: Apply with soft cloth all over affected surface, and when arms or face are sorely erupted, keep parts covered with same.

BY HARRY BROOKS,
Los Angeles, Cal.

In the BRIEF, page 760, a California subscriber wants a cure for ivy poisoning, and I wish to present to your readers a preventive. A couple of years ago, in Northern California, my wife rubbed some of the following over her face, but omitted the ears; the next day the ears swelled up, but the face was uninjured. The preparation used was as follows: Take a level teaspoonful of concentrated lye and a quart of boiling water. After it cools, bottle it for use. Rub over all exposed portions of the body before going where you are likely to be infected, and repeat on returning home. The ivy is only poisonous when it is in the flowering stage, and when the wind blows towards you, carrying the minute spores into pores that are open through perspiration.

BY J. BOMMER, M. D.,
Rolling Fork, Miss.

I find an article in the October BRIEF headed: "Poison Oak or Ivy." A California doctor wishes to know a treatment for poison oak. This plant grows almost on every stump in the Mississippi delta. It seems to affect some people more or less, while some are not affected at all, and causes an inflammation of the skin, with swelling, and breaks into a running and scabby sore. It affects animals the same way, as they are very fond of eating it in the spring. I have treated it for twenty-five years in the following way: Take a teaspoonful of ipecac, put in a teacup, add boiling water to one-third cupful. Let steep like tea. When cool, apply with a feather or mop every four hours. In most cases, in twenty-four hours it is cured. It takes out the swelling and itching, dries up, and heals quickly. In animals I make the tea stronger, and add a few grains of bluestone, and use mop. When the lips of the animal are swollen, stiff and scabby, they can not eat. After a few applications the swelling begins to soften, and the animal will go to eating, and get well in three days. I mention this about animals so the poor animal can get relief as well as human beings. As this is a burning, itching affection, and sometimes becomes very serious, I would be glad if the doctor would report on this treatment after trying it, and let the readers of the BRIEF put the remedy to good use.

BY A. CLEMENT SHUTE, M. D.,
Pottstown, Pa.

The most common cause of poison likely to be called to treat; however, quite a different poison from that of sumach or of weeds.

For poison ivy the internal administration of the 30 x dilution of rhus toxicodendron, as prepared by any reliable homeopathic pharmacy, in drop doses, or the equivalent in pellets, repeated from one to three hours, is certainly curative in the large majority of patients; in fact, in quite nine out of ten, but the occasional case, with severe idiosyncracy, think this remedy will not reach; will respond but slowly to any other one remedy; it may be there is a general blood condition in these patients that is the cause, and no remedy will do more for such a general defective blood condition than echinacea. Use it in five-drop doses of tincture every two to four hours.

Locally, to relieve the intense itching, sweet spirits of nitre does most good.

Recently a native of India stated that if any one susceptible to ivy poison

would bite off part of a leaf and chew and swallow it, he would never again contract poison from that plant.

This I have not proven, but would like to hear results. The sumach poison, I admit, is a hard one to meet, but the poison from weeds which appears on feet and hands of children in suburbs running among the weeds where there are distinct blebs, form with crusts which gradually enlarge to the size of a dime or even a quarter, and are especially likely to be near the nails, I have found the remedy to be hura brasiliensis, 30 x dilution, as prepared homeopathically, in same dose as rhus toxicodendron for ivy poison, and it has never yet failed to speedily cure.

BY FRANK S. ALEXANDER, M. D.,
St. Louis, Mo.

I read in October issue, on page 760, of a brother doctor who wants to know how to cure ivy poisoning or oak poisoning. Well, there is no difference at all.

In practice we often have to deal with a most troublesome affection of the skin, caused by coming in contact with a vine commonly known as poison ivy, or poison oak, as it is called by most persons in different sections of the country. It causes a violent erythema, with much swelling; intense burning and itching. Here is a prescription which, in my hands, has worked like magic, only a few applications being necessary for a complete cure. I have seen some very severe cases relieved by two or three applications. This simple prescription, which I have used with unvarying success, is as follows:

℞ Plumbi Acetate .....1 drachm.
Spt. Nitrosi Ætheris.....6 ounces.
M. Sig.: Apply on parts affected.

This simple prescription has been so successful in my hands that I hope it will benefit those physicians who have heretofore been unsuccessful in their treatment of this simple affection, as I have found that it is in the treatment of these simple affections that our text-books have given us little satisfaction.

[Written for the MEDICAL BRIEF.]

Some Points Regarding "Appendicitis;" Really a Misnomer—Proper Treatment for Pelvic Inflammations.

BY CHARLES E. PAGE, M. D.,
Boston, Mass.

Another new way of accounting for the greater frequency of appendicitis, of late years, is going the rounds of the lay press just now. "It is said" to be steel-rolled flour, in which minute particles of steel from the rollers are found. The fact of the matter is, the disorder is hardly more common than it has been for ages, and the new name is altogether misleading. It is more properly called by the old name, "inflammation of the bowels," the seat of the trouble being in the colon, and is the result of dyspepsia. The victim is usually one who has been troubled with intestinal indigestion for months, sometimes years, constipation having, in most cases, been in evidence and treated by purgative medicines.

Still another way of explaining the frequency of "appendicitis" is, that the surgeons need the money! One very eminent German physician, in an article in a very regular medical journal, explains the "Craze for Cutting," which has been running riot of late years, attributing it to "the lust for surgery and for big fees;" and no less a light in the medical and surgical world than Sir Henry Burdett, M. D., F. R. S. P., etc., of England, on a visit to this country last year, said some very strong things about "the craze for operations." "What we want," he declared before a meeting of medical men, "in every country, is a voice in the mouth of every great surgeon who, with the wisdom to be conservative, has the courage to protest against this ever-growing tendency to put a knife into everybody on the smallest possible pretext."

As for the alleged uselessness of the vermiform appendix, every bed-rock student of hygiene and physiology scouts the notion. A few years ago a thoughtful physician out in Pennsylvania expressed himself pretty plainly in opposing the prevailing idea that the appendix, if it ever had a function, had outgrown it, so

to say. He insisted that it was a useful organ, and he called it "the little oil can of the colon;" and the eminent Sir Wm. McEwen, M. D., professor of surgery of the University of Glasgow, approves of the appendix, and has set his face against appendectomy. He explains that the cecum is an important digestive organ, and that it and the appendix are thickly lined with glands which secrete a digestive fluid of great value, when in combination with other intestinal juices. The appendix, he says, also pours into the ceeum large amounts of mucus highly useful in lubricating the alimentary bolus, and at the same time repressing the development of injurious bacteria. Dr. McEwen calls attention to the almost universal pre-existence of indigestion in cases of "appendicitis," and also to the fact that those who have lost the appendix are, as a rule, thenceforth subject to ill-conditioned bowels, either chronic constipation or diarrhea.

Speaking generally, appendectomy is, in my opinion, about as absurd, though vastly more mischievous, as cutting off the little toe in a case of hip disease. Many fatalities result (though not always so recorded) from a peritonitis caused or increased by the cutting.

Inflammation of the appendix very rarely, to say the least of it, occurs as a primary disorder; the beginning of the inflammation is in the colon, in almost every instance. It may and does often spread to the appendix, and in cases in which the colitis and peritonitis are not properly treated, an abscess may form in the appendix. Something like fifteen years ago, the late Senator Cutler, of Morristown, N. J., became ill with violent abdominal pains, and all the alleged symptoms of appendicitis, and an operation was decided upon. A prominent New York surgeon was called in and the patient was put in condition, and the abdomen opened up, and a search was made for the appendix, but, curiously enough, no such thing could be found. He had none! The only possible explanation of the fact was that in a previous attack of peritonitis, two years before, the appendix had sloughed off, and the wound healed safely. Mr. Cutler ever after that chuckled, so goes the newspaper account, whenever appendicitis was mentioned. "I read of a Boston man," he said, "who took the precautionary step, which I think I shall follow. He is said to wear a card pinned to his undershirt, bearing the inscription, 'My appendix has been cut out!' He says he does this to keep the doctors from operating on him for appendicitis in case he is picked up in a fainting condition on the street some day. I think I'll do the same." At the time it was remarked that Mr. Cutler was "enjoying rather a grim joke at the expense of the medical fraternity;" but the really grim joke was at the expense of the victim that paid the big fee for the needless, harmful, and very dangerous operation. It is not at all unlikely that had he been operated on during his earlier attack, and the appendix removed by the surgeon, instead of by the organism itself, that illness would have been fatal.

One moral may be learned from the foregoing, viz., the removal of the appendix, even when done by nature, does not prevent, but really renders more likely, pelvic inflammations, for reasons indicated in Professor McEwen's explanation as to the function of the appendix.

As to the appropriate treatment for all pelvic inflammations, there is but one, as it seems to me, and that is about as follows: Therapeutic fasting is demanded, as is true of all acute diseases, until convalescence is fully established; then, and then only, is food anything but a drug, and an ugly drug at that, since only indigestion and blood-poisoning from the absorption of putrescence from the alimentary tract, can result from ingesting even the most wholesome food into a stomach which is, for the time being, absolutely incapacitated for digesting anything; water being the sole nutriment demanded. It is well to have the patient take a small half-cupful of moderately hot water as often as every hour or two during the daytime, in order to maintain proper fluidity of the blood, which otherwise can not do its normal work of healing. The cold compress over the whole region of the abdomen is just the right thing, and is deliciously soothing when rightly managed, as follows: Two folds of coarse

towel wrung tightly from cold water (usually, ice water, especially after a few applications of the compress wrung from cold water), and placed over the entire abdomen, the damp folds to be freshened as often as they get hot, and long before any approach to dryness is observed. In some cases the changes will at first be made as often as every ten minutes, and at lengthening intervals, as the inflammation subsides. Over the damp folds as many folds of dry towel are placed in every instance. The use of ice directly to the skin is brutal and mischievous, but only good can come from the cold compress, as above indicated. The same treatment is indicated in all pelvic inflammations, whether the disease be puerperal fever, peritonitis, ovaritis, or *n'importe* the name. All pelvic inflammations are thereby readily reduced, if managed skillfully at any early period of the disease.

Years ago, I found that stimulants and all forms of drugging were against me in treating these cases. Patients, seemingly, improving under the prevailing treatment only too often suffer a relapse and go down to death, stimulants and forced-feeding being the chief enemies turning the tide against a recovery. In September, 1903, I received a telegram from a young man at Turin, N. Y., describing the case of his sister, twenty-two, attacked with appendicitis, as diagnosed by the family physician and consulting surgeon, and asking me to wire directions for treatment, as it had about been decided to operate on the following day, unless I could accept the responsibility of the case. I at once wired definite instructions for treatment, and there were several exchanges of telegrams, and all confirmed by letter, and the patient was rather speedily convalescent, and her recovery came in due time. In the course of the correspondence I explained certain exciting causes of pelvic inflammations, and directed a wholesome regimen all around, and there has been no recurrence of the trouble, and the young woman's health has been markedly better than it had been for years before the attack. She was a frail person, and two of her sisters had died of consumption, and her friends felt much reason for fearing that her fate would be like that of the others. Certain it is that in her delicate state the contemplated operation would have given her a very close call, aside from the question of the loss of a very useful, and, generally speaking, perfectly inoffensive organ.

120 Tremont Street.

[Written for the MEDICAL BRIEF.]

Dianism.

BY J. WATERLOO DINSDALE, M. D.,
Prescott, Ariz.

The teachings of this article apply to all who desire to have sexual health and manly vigor, whether married or single. The facts stated and deduced will certainly prove helpful and instructive to each careful reader.

If possible, before attempting to read or study this treatise, settle it in your own mind that creative functions are a part of the divine plan, and that wisely used, they are in no sense unclean. Resolve to keep them sacred, and to ever treat the subject with reverence. This is a vital step toward health and holiness.

Marriage is the union of two persons of opposite sex, in mutual obligation to each other, to their fellow men and to God; to live in accord with highest convictions of right and duty. True marriage involves a mutual, controlling love.

The success of marriage depends upon the wise, intelligent, loving association and harmonious relations of husband and wife in all duties and pleasures that pertain to life.

Obedience to the laws of sex and to the laws of love will make marriage a true union of physical and spiritual natures, and dispose of the query: "Is marriage a failure?"

It is not too much to say that there is a rapidly growing sentiment in favor of wise self-control and the conservation of vitality by the observance of chastity and continence.

The question arises and has arisen in almost every married person's mind: Why is marriage so unsatisfactory when courtship was so delightful? Can the beautiful, lover-love of courtship be taken into and preserved through married life?

The doctrine of physical necessity and the subjection of woman to man's desires are a part of the gospel with some people. That the former is a delusion, and the latter an injustice, it ought to be easy to prove.

The following declaration seems to indicate that the dangers from a chaste life are purely imaginary—without any real foundation:

"In view of the widespread suffering, physical disease, deplorable hereditary results, and moral deterioration inseparable from unchaste living we the undersigned members of the medical profession of New York and vicinity, unite in declaring it as our opinion that *chastity—a pure continent life for both sexes—is consonant with the best conditions of physical, mental and moral health.*" (Signed by leading physicians of New York City and vicinity.)

Sex desires are natural to the normal individual, but unless offspring is wisely designed, and wished for, sex desires must be controlled and directed. It is a scientific fact that the natural productions of the sex functions, stimulated by desire, and not wasted in indulgence, are reabsorbed into the system, through the circulation of the blood, and surprisingly strengthen the physical, mental and spiritual natures. On the other hand, their loss, through whatever source or cause, has a decidedly weakening and depressing effect.

Another evidence that seems conclusive against the "physical necessity" claim, is the practical agreement of all reputable writers and thinkers that up to the marriageable age there should be purity of life, abstinence from all physical sexual excitement. If this universal view is well founded, it is probably one of the strongest arguments in favor of marital continence and against "physical necessity" that it is possible to deduce.

From the age of puberty boys and girls are uniformly expected to live continently until marriage. This requires an average of at least ten years of abstinence in each life, at a time when habits are being formed, and when, for the uninstructed, abstinence is most difficult. If the demand is a just one, and the young folks can maintain virtuous lives during this most trying period, it is clear that the doctrine of "physical necessity" is an erroneous one.

Up to the years of puberty the organs of sex are undeveloped and inactive. Soon after this phase of development occurs, a marked transformation takes place throughout the entire physical organism. The voice changes from the shrill treble to the manly bass or musical tenor; hair appears on the face and body, the muscles become firmer, the form more angular, and the skin, which has been delicately soft, assumes a coarser, stronger appearance. Even "the mind acts with new vim and brightness." "And all this because the testicles develop normally and secrete fertile semen, which, being again *reabsorbed* (not lost or wasted) into the general system, and by reason of its reflex stimulating influence over the *entire* system, enables a youth to stand up like a creature of God." (Dr. Sperry.)

The principles of the Golden Rule, and the law of love taught in the Scriptures, clearly prove that the subjection of woman is an injustice. That maternity should, on any pretext, be forced upon her, is an intolerable injustice. If woman, the person most directly concerned, is not allowed to decide this matter, it is very certain that no man has a right to determine it for her. What man, with a spark of liberty in his breast, would submit, were it possible, to having maternity, with all it implies, forced upon him? How, then, can any manly man, with the Golden Rule in view, advocate the subjection of woman?

If these conclusions are correct, and the exercise of procreative faculties is confined to the times when offspring is mutually desired, what is to be done with the imperative demand of the physical nature? Crucify it, starve it, kill it, have been some of the answers of the past, but the effects have been similar to destroying the will of a child—little worth saving is left. What is the true method?

As sexual attraction begins in early childhood, before procreation is possible, and, as in courtship, brings satisfaction without any physical contact, it is evident that there is at least another mode of sexual satisfaction besides the procreative. Indeed, the higher functions of sex are

mental and spiritual, and the procreative should never be used except with the free, full approval of the two higher.

That all excesses and perversions are abnormal is a self-evident truth. Excessive generative desire is a product of *incontinence in thought or life.* It is greatest when there has not been time for over-accumulation; and the longer the period of continuence is maintained the less will be the abnormal desire.

The satisfaction derived from intimate and pure sexual association, dispels the generative desire; while the repression of either creates a demand for the other. The physical remedy, therefore, for sexual incontinence is to be found in the full satisfaction of the affectional function, in pure and intimate association; and for those who have not the privilege of sex companionship, in directing sex forces into mental channels of activity, always exercise the affectional function mentally in preference to the generative.

Sexual satisfaction is to be obtained in all degrees of loving, harmonious association—even from affectional thoughts, personal presence, and each form of personal contact up to the including generation. As mental and spiritual enjoyment of sexual companionship is superior to physical pleasures, as it is also more lasting, elevating and ennobling, it should be the object of the married pair to live as chaste lovers.

Humanity, being the culmination of all past generations, it is impossible to decide upon an exact dividing line between normal and abnormal tendencies. Thus the desire for sexual companionship, that is pure and natural, and needs only mental friendship to satisfy it, may, through misunderstanding or erroneous teaching, be diverted into feelings and desires which are the opposite of love. One who has perverted his faculties to sensual, selfish purposes, has thereby dulled his sense of equity, and is not in condition to appreciate the higher enjoyments that come from noble living.

It is most important to recognize the sacred character of sex in each of its normal relations. Failure to realize satisfaction in purity generally arises from ignoring the affectional functions of sex. In order to live purely men and women have thought it necessary to deprive themselves of sexual association and companionship. They have thus given this important part of themselves no opportunity for normal exercise or development. This abnormal state has a tendency to make virtue difficult, and results, usually, after a season of restraint, in some form of excessive sensuality. Such people are ready to declare that purity is an impossibility, when the simple truth is, they have been living abnormally. The remedy is to be found in the exercise of the affectional principle of the sexual nature in pure and sympathetic companionship.

What is it that distinguishes a thief from an honest man? One has accustomed his mind to covetous thought—to look upon the property of others with an intention to possess it unlawfully. The other maintains an opposite state of mind. The difference, therefore, is narrowed to that of the habitual mental state of each toward the property of others. What is it that distinguishes the normal man sexually from the sensualist? It is evidently the habitual mental state of each respecting the opposite sex. The normal man looks upon woman as a gift, and equal, a companion for highest soul communion, for sexual satisfaction through the affectional nature, and when wisdom, love and mutual judgment dictate, as possible and honored mother. The sensualist being ignorant of the law of life and the dual functions of sex—the affectional and the generative—looks upon woman as a means for mere physical gratification.

Men and women have only to constantly endeavor to entertain these ideal (true) thoughts concerning the opposite sex to reach the truest and most lasting happiness that can come from the association of the sexes. As they undertake to do this they will find that other thoughts will occur to them with less and less frequency. Indeed, new brain-cells will be formed, and the true lover-love developed in all its divineness.

Physical contact without spiritual harmony is always very unsatisfactory. This is doubtless the reason for many very unhappy lives—the insistence upon marital right—that of spiritual companionship, and the satisfaction of the affec-

tional functions of the sexual nature—is entirely overlooked. The continuance of such a course means the destruction of love. Indeed, the preservation and conservation of true love in married life requires that *neither shall insist upon what the other can not willingly grant.* This is one of the rules observed by Mr. Gladstone and wife, and to it he attributed, in large degree, their happy married life. The principle is especially pertinent in all that concern sex relations.

Those who do not understand the turning of passion into affectional currents, will find purity of thought and life impossible.

The law of sex, when properly understood, means the elevation of the individual and the truest happiness in the married state. Those who imagine that the law will deprive them of pleasure should understand that new, truer pleasures result from keeping the law than can possibly come from breaking it.

One of the most frequent objections to a continent life is that it deprives the married pair of the love manifestations which accompany physical union. Every person who has practical knowledge must admit that the highest form of love experience does not depend upon the culmination of physical union. That love is not an essential element of physical union is abundantly proved by the almost utter lack of love in what are termed illegal relations.

All the real love manifestations are intensified by the wholesome methods herein advocated, so that the reverse of the objection is true.

Many advocates of continence depreciate the importance of the sexual nature, and look upon it as something of which to be ashamed; but this erroneous view is by no means a general one. Wise continence is not a depreciation, but rather an exaltation of all that properly pertains to the sexual nature. As in all the lower forms of animal life this faculty is restricted to the purpose of reproduction, so, in the human economy it should be held sacred to its clearly-defined uses. It should be plain to those who fail to find satisfaction in abnormal practices that something is wrong. Why, then, should they not turn to the course indicated by nature, science and religion?

The principles herein advocated do not forbid the exercise and use of the sexual nature in normal—the affectional, and the building up of mental and spiritual forces—but the waste of vital elements through abnormal and perverted practices, both mental and physical.

A potent reason for abstinence from the generative function is the fact that during pregnancy and lactation the normal woman has little or no desire for creative association, while her nature demands, and the best interests of the child require, the loving, sympathetic and careful attention of the husband and father. These attentions, in the right-minded, will not tempt to mere sensual indulgence, but will lead to the higher, nobler, spiritual and harmonious relations—elevating, inspiring and thoroughly helpful.

It is asserted quite generally now, that woman should always be free to determine when she shall accept the parental office. It is not amiss to say that desire for parentage should be perfectly mutual, and justice demands that so important an office should not be thrust upon any one.

"Always should the deep, pure instincts of woman guard the door of the temple of God when He causeth the beginning of a young immortal to arise." (J. H. Jones, in "Perfect Good in Wedlock.")

These considerations put a decided premium upon self-control, and clearly indicate that the sex feelings should not assume the creative condition except when parentage is mutually desired. Until this time sex force should be directed into affectional and other uses.

It has been taught by some that through wise continence the vital fluids are transmitted into brain and muscle, giving new energy to the body and keen, clear perception to the mind, and it is safe to conclude that the methods herein advocated lead directly to these desirable results.

The fear of impotency from lack of procreative use is a groundless one. Most eminent physicians have positively asserted that they never knew a single case of impotency to result from continence, but all were the result of perversion, excess and waste. The seminal secretions

are analogous to the tears, being secreted and expelled only on occasion, and losing nothing from abstinence. Besides, there is always ample opportunity for the normal exercise of the affectional functions of sex to preserve a healthy and vigorous condition.

Many pages of Noirot's works are devoted to showing that continence prolongs life, while incontinence hastens old age.

"The canary, if permitted to raise offspring yearly, lives not more than eight or ten years, while the celibate bird has survived twenty-two years." (Hervieux.)

Persons who have accustomed themselves to wasting their sexual secretions in any way, will find the return path to normal life a more or less difficult one, according to the strength of the habit and the impairment of the will which always results from the waste of sex vitality.

To remain continent, to turn the current of life inward instead of wasting it, to direct its beneficent force in channels of affection, and use it to build up and enrich the entire system, will, until the mechanism of the body recovers its normal condition, cause more or less effort and inconvenience. But the result will be worth infinitely more than the cost—victory over enslaving appetite, perfect self-mastery.

[Written for the MEDICAL BRIEF.]

Medical Treatment of Sterility.

BY ELI G. JONES, M. D.,
New Brunswick, N. J.

About one woman out of ten is sterile, two-thirds of the cases of sterility we meet with are caused by displacements.

Not long since I read an article on treatment of sterility, where some thirty or forty different remedies were recommended. All this is confusing to the busy practitioner. A good mechanic only needs a few tools. I shall mention just a few remedies I have used in nearly forty years' practice.

To make this a practical article I will illustrate it by some cases I have treated successfully:

One evening, after my office work was over, a gentleman and lady from New York City called to see me. They were quite wealthy and they both longed for children. Various remedies had been tried, and different means used to accomplish the result, but conception did not take place. Upon making a vaginal examination I found a profuse leucorrhea. We know that the natural secretion of the vagina is slightly acid. In this case the blue litmus paper dipped in the discharge showed a deep pink color, showing an excess of acid, enough to kill the spermatozoon after each connection.

This, then, was the cause of the sterility. I had a tampon made of soft linen cloth, wet with one drachm of phosphate soda in one ounce of glycerin, placed this in the vagina once a day for three days, then let the husband have intercourse with his wife. In two months from that time I heard from her husband that they had reason to believe that conception had taken place. Later on, she gave birth to a healthy child.

Another lady had become pregnant three different times, but she always lost it within two or three months after conception. I found, upon examination, an induration of the neck of the uterus. In such cases sterility nearly always exists. I used tampons of ammonium sulpho-ichthiolate and glycerine, equal parts, placed up in the vagina against the mouth of the uterus, once in twelve hours. Gave her arum. mur. nat. third decimal (chloride of gold and sodium), three grains one hour after each meal.

With the above treatment I removed the induration, and she became pregnant in about three months after commencing the treatment.

In another case the couple never had had any children. The wife complained that she took no pleasure in the sexual act, had no desire whatever for her husband's embrace. The editor of one of our journals, writing on this subject, made the statement that enjoyment of the act of sexual intercourse has nothing to do with conception. I beg to differ with him, for I know, by many years' experience, that the most passionate women are the most apt to conceive. In the above case I found no induration of os uteri, no menstrual discharge from the

vagina. Just a plain case of frigidity. I prescribed fluid extract of saw palmetto, twenty drops in water, three times a day. Then told her husband not to offer to have intercourse with her for a month, on the last day of her monthly period to have connection with her. After the act have her lie perfectly still and cross her legs, elevating the hips. In a month's time, under the saw palmetto, she was ready to welcome the husband's embrace, and, as he followed my instructions, she did not menstruate again, for conception took place, and, later on, she presented her husband with a boy.

Still another case of a lady who had never had any children, though married several years. She complained that her husband did not satisfy her in the sexual embrace, and she had become very much disgusted with her married life.

A further investigation of the matter developed the fact that as she was quite fleshy and her husband's penis a short one, the head of it did not reach the os uteri, and conception could not take place. I then advised the couple to change positions during the sexual act, and to have connections on the third, fifth and seventh day after the monthly period. In three months time she reported herself pregnant, and later on, gave birth to a child.

In one case of ante-version of the uterus, I advised sexual intercourse standing up on their feet, and conception took place.

In the case of a lady with an *irritable* clitoris, excessively passionate, I prescribed monobromate camphor, two grains three times a day, to overcome the irritability of her clitoris. In a month's treatment she reported herself very much better, and a few months afterwards she became pregnant.

As a tonic for a woman when her sexual passion is weak, I like the saw palmetto. It is an *ideal* sexual tonic.. A careful study of our *materia medica* will discover valuable remedies having a positive action upon the uterus, and with them we can cure the different forms of displacement of the uterus without the aid of pessaries, supporters, or any operation. I know this to be a fact, for I have cured such cases "many a time," but that is "another story," and must be told in another article.

When you have a case of sterility, try to find the cause of it, and remember that a large proportion of such cases may be cured by a little medicine and good common sense.

85 Bayard Street.

[Written for the MEDICAL BRIEF.]

Man.

BY E. E. GILMORE, M. D.,
Adrian, Mo.

The essential study for us is man. In order to properly qualify a physician to follow his chosen profession, he should be made thoroughly acquainted with man, and the vital laws that govern his construction from the union of the atoms in the female womb to his death; not only his size, form, motor and intellectual forces, but his origin, development and final destination. He should be able to count the elements, simple and compound, which are essential to his construction, and the vital force that arranges them into his beautiful, intricate and wonderful body. Like all other organic bodies, he is constructed out of material elements by the biol or ethereal force that permeates the universe. That force is not a compound, but a unit simple, and is the power that constructs every organic body that exists. Every material body, solid, semi-solid, or liquid, that exists in space, was brought into existence by that simple force uniting the original simple elements and condensing them into bodies. The manifestation of that simple unit force is seen in the revolving worlds, as they roll in magnificent splendor through space, as well as in every organic body, from the starch granule to man, and it, by some, is called God, whose cosmogony ceased at the end of the sixth period.

When the first period began and the sixth period ended, I do not know, yet we know that things exist as they do now, and must have had a beginning. We recognize man as the highest type of organic beings that occupy this sphere of existence. There may be germs hidden in ether that have not yet been brought by

natural force into the essential environments to generate the constructive force to start up the metabolic changes of the essential atoms holding in potentiality the central essence which, when initiated, might develop a different and higher being than man. Perhaps, away down in the future periods to be counted by the revolutions of the earth, a different class of animals may occupy this land of ours, and a higher and nobler race of people rule where we are now supreme.

Our most important study is self; for a thorough knowledge of our organism, its synergists and incompatibles, is the essential equipment of the physician, which will enable him to fill his place in life honorably and with dignity.

Man, as a being, is a unit in the universe, yet in his construction he is a universe in himself. Our organism is built up with cells. The soft tissues, muscles, bones, the enamel of the teeth, are builded out of cells. Each cell is an independent unit, and has a specific duty to perform. One group builds the muscles, one the bone, and one for every department of the structures of the body. Each group of cells is equipped, prepared and endowed with the essential skill to enable it to construct out of certain material a definite structure. Therefore, we have a brigade of cells to build the nerve structure, one for the muscular system, one for the osseous tissue, and one for each distinct tissue of the body. They are mechanics, each qualified to do a certain part of the body-building. The brigade that builds the nerve can not construct the skin, muscle, tendon, bone, or any other part of the body, except its own.

The cells are divided into three brigades, the carriers, the mechanics, and the scavengers. The blood cells are the carriers, and number nearly seventy-five billions. They receive the material and convey it to every part of the body, to every organ, and also gather up the rubbish, waste material such as can not be used, and carry it back to the outlets, and it is dumped as garbage. The little mechanics take from the blood just such material as they need for the structure that it builds, and reject all the rest. The scavengers are the police, who guard the inner parts of the body, standing guard over the blood cells and the mechanics, ready to arrest any intruder that enters; and, when the bacteria, or any foreign life unit, enters the circulation, they immediately move out and attack them, destroy them, and their dead remains are carried out of the system by the blood. Should the invading germs outnumber, and be stronger than the phagocytes, they will conquer, and death to the organism results, but if the phagocytes are in the ascendancy, they conquer, and the organism assumes a normal condition, and life continues.

What a grand scene to contemplate, when you stand and look at man, in the full vigor of life, and contemplate in your mind his wonderful structure; take him apart, look at his muscles, bones, nerves, glands, all separately in your mind; you look at him as a unit, then view in your mind the seventy-five billion of unit blood cells, and at least one trillion five hundred billions of the little unit cells at work building and repairing that human unit, each of which never ceases work, never rests, but are constantly on the move! Each of these cells is a unit life, and they are just as essential to the universe as man. Then watch the phagocytes every day, perhaps, as they march out to attack an invading enemy, watch him pounce upon the enemy and strangle him. Many of these conflicts, unseen by us, are grander than the battles of Sebastopol, Antietam, Lookout Mountain, or any battle fought by man. Were it not for these little cell-life units, the human family would be exterminated, and all the grandeur and splendor of arrogant man would go out.

Then, the essential study of the physician is man. This embraces anatomy, physiology, pathology, and therapeutics. Anatomy is the basis of his knowledge; for no one is capable of taking care of a machinery without being familiar with its intricate structure.

Then comes physiology, which teaches the function of each part and structure. Then physiology is an essential study for the physician.

Then, when the physician becomes thoroughly acquainted with anatomy and

physiology, he is ready to study pathology, which means the condition of the organism in every deviation from a normal state. In the study of pathology, it includes bacteriology; for, if we discover an abnormal state, we should know the cause of the change in the organism. Then the study of bacteriology is one of the very essential studies of the doctor; for a knowledge of bacteriology is essential to the proper knowledge of pathology.

Therapeutics is also an essential study for the physician, because no physician should ever give a dose of medicine without knowing its effect upon the human system. If he does, and gives it not knowing why he does, he is a fraud. Chemistry is one department of therapeutics, and when we speak of a physician's studying therapeutics, we mean that he should also study chemistry.

The knowledge the physician wants is that which will qualify him to superintend the human being in health, direct and instruct him how to avoid disease, and, if sick, he should be able to recognize the conditions and its cause, and then apply the proper remedy to restore him to health. The physician stands on a higher plane of honor and dignity than to be a money-grafter at the expense of the sick mortal, and administer to him solutions and compounds, of which he is ignorant, and has no conception of their effect upon the individual. It is theft to do it.

Then the proper field of study for the physician is anatomy, physiology, pathology, and therapeutics. Theology, astronomy, geometry, trigonometry, Latin, German, French, or any other language, except the English, is of no use to him, for every scientific fact known to man can be learned in the English language. In fact, the English-speaking people lead the world in every department of science, and I do not think that the American youth who wants to study medicine should be required to waste his time over these languages, especially the Latin language. How degrading to our race to see a little ten-year-old child in our common schools with a little Latin grammar in his hand. It is an insult to the American student and to our race, to force it on any American youth.

Medicine rests upon a scientific basis, and is governed by natural laws, immutable and inviolable. We have medicines that will stimulate functional activity, and others that will decrease it. Certain substances will increase the motor force of the heart, and others will diminish it. One medicine will increase the action of the kidneys, and others diminish it. So it is with every function of the body. We know that we have medicines that will increase or diminish the action of every organ in the body, and there is another point just here that is vital: a medicine that will increase the motor force of an organ will not decrease it. Then, it is very evident that no one medicine or compound will act as a rémedy in all conditions of the organ. These patent compounds, which are advertised to cure heart, kidney or liver troubles, are frauds, for the term "troubles" does not mean anything. Every patented compound should be banished from society, and these advertising "fakes" should be driven out of the country, and let common sense and intelligence rule supreme. Let man come to know himself, and with the scepter of that knowledge he can sway and rule the world with a reign of wisdom brighter than yet dreamed, and more glorious than yet imagined.

[Written for the MEDICAL BRIEF.]

Can Tuberculosis be Cured by Electricity?

BY NELLIE M. JOHNSON, M. D.,
Perry, Iowa.

What is our therapeutic mission in tuberculosis? To enhance the vitality, to arouse the resisting capacity of the patient, and render the organism immune to the onslaughts of the bacillus.

Exercise is a much valued element of bringing about these results. What is to be done in acute cases? The patient is put to bed; we direct good nursing, diet, and baths; exercise is out of the question. Until we obtain an antitoxin which will destroy the tubercle bacillus, we must endeavor to do the next best thing, viz., en-

hance the resisting capacity of the patient. Static electricity has revolutionized the treatment of these cases. This method, of course, includes climate, rest or exercise, diet, bathing and feeding.

When seen in the early stages and under favorable conditions, it has been the writer's experience that very much, constitutionally, may be done for consumption.

But if the case has advanced to any considerable degree, and the patient is compelled, by circumstances, to remain shut up a better part of the time over sewing, or over a desk, the conditions are very unfavorable to any form of treatment. Little can be expected, except in a change of climate.

Events transpiring during the past year have awakened a new interest in the employment of electricity in medicine. The publication of the successful employment of electricity in the treatment of many conditions has caused many to give it consideration who have, heretofore, absolutely ignored the fact that electricity, in any form, was of therapeutic value, except as they would recommend it in hopeless cases.

When the patient's diet, work and exercise can be controlled by the physician, and, if too much destruction of lung tissue has not already taken place, the author has been led to believe, by the successful treatment of three cases, treated by electricity, that even in this climate, cases of consumption can be cured by daily treatment.

Treatment.—Go over surface of chest daily, for a time, with the high frequency, not over twenty minutes' duration, followed by thirty minutes' insulation.

The patient shows improvement, first by coughing less, night sweats diminish and finally cease, appetite improves, color and strength gradually return, and the patient will soon volunteer the information that he is improving.

In addition, it may be truly said that few measures in the armamentarium, medical or physical, offer so great possibilities for the relief of human suffering as static electricity scientifically applied.

Its application is limited to no specialty, and no specialty is complete without its addition as a means of relief.

Producing, as it does, the X-ray, with all its possibilities as a therapeutic agent, added to the therapeutic effects of the various static modalities, makes the static indispensable to the up-to-date physician and surgeon.

[Written for the MEDICAL BRIEF.]

A Rational Treatment of Senile Endometritis.

BY ERWIN REISSMAN, M. D.,

Assistant to the Department of Surgery, Good Samaritan Dispensary, New York. Newark, N. J.

The presumption that women past the menopause are not prone to uterine inflammations is erroneous, but this seems to be a fixed belief with the laity, and some medical men. The belief, also, that chronic uterine inflammations are past cure is equally wrong, and such belief is largely due to ineffective attempts in dealing with them.

A very prevalent affection of women past the climacteric, is senile endometritis, and the practitioner who will appreciate the importance and gravity of this uterine inflammation will soon discover enough evidence upon examination to warrant his looking for an effective remedy.

It is well known that women in general only reluctantly consent to vaginal examinations, and particularly is this so with women who, in their younger days, have not suffered with uterine disorders. In such cases it is well to have in mind conclusive and convincing argument to impress them with the necessity for examination and treatment. I believe that in many cases the unpleasant as well as painful symptoms will materially aid in obtaining the required consent.

Some three years ago, while assistant in the gynecological department of the New York School of Clinical Medicine (Dr. A. H. Goelet's service), I observed many cases of senile endometritis which were effectively cured by a simple method, first employed and described by Dr. Goelet. Since then I have had the satisfaction of relieving a number of patients of this troublesome disorder by this very method.

The etiology of this chronic inflammation may be a neglected endometritis during the menstrual life, but it undoubtedly is the result of the atrophic changes which the uterus undergoes during the menopause.

A deteriorated condition of the general system also plays an important part.

Pathologically, we find an altered condition of the glandular structure and the secretions, a complete change in the character of the epithelium of the mucous membrane, and at times a complete disappearance of the latter.

There is a general contraction of the uterus, a narrowing of the cervical canal, with an eventual obstruction or obliteration. I have seen cases where the mucous membrane was entirely destroyed, in places, by the acrid discharge, and the result was the formation of cicatricial bands, not only involving the cervix, but attacking the vagina, and so narrowing the vaginal vault as to entirely obliterate the cervix.

In appearance the vagina is particularly characteristic. The surface is pale, almost white and glistening, in some spots there are red papillæ, consisting of capillary vessels, demonstrating destroyed epithelium. Sometimes the vagina appears inflamed and covered with muco-purulent discharge, intensely acrid, causing a vulvitis extending to the thighs and rectal regions.

The discharge varies in character from muco-purulent to sero-purulent, according to the duration of the disease.

The symptoms of this condition are variable.

The patient will complain of headache, simulating a burning on the top of the head; a burning in the lumbar and sacral region, rectal tenesmus, and vesical tenesmus, the latter more frequent.

At times there is a chronic cystitis and urethritis, with a urethral discharge.

Impairment of digestion, with evidence of malnutrition, is a frequent complication.

The general health is poor, the skin is dry, there may be nervousness, sleeplessness, and mental depression.

In women past the climacteric, manifesting the above symptoms, a diagnosis of endometritis can be safely made, and an examination should be insisted upon.

Treatment.—Dilatation of the cervical canal, with the consequent promotion of free drainage, is the simplest and most effective method of treatment. How to accomplish this without doing injury is the most important point.

Forcible dilatation of the canal with steel instruments may result in rupture of the cervical tissue, as the cicatricial bands will not yield. Curettage of the uterine cavity is not called for, if the mucous membrane has already been destroyed by the acrid secretion. The same applies to caustics and irritants. In the early stage of senile endometritis, a short time after the menopause, the above methods, if carefully done, are very useful, but later they are injurious and useless.

But still the requirements for a cure are the same, and in order to maintain a canal sufficiently dilated to obtain free drainage, and to admit of repeated irrigation, necessary for an aseptic condition, some plan must be adopted which will favor this result.

In such cases, the negative pole of the galvanic current, inserted in the uterine cavity through conical electrodes of gradually increasing size, is one of the most satisfactory methods of treating this most persistent and chronic gynecological disorder.

By using a moderate strength of current, five mm., a possible destruction of the tissue is obviated. When the proper degree of dilatation is accomplished at each sitting the uterine cavity should be irrigated with a weak alkaline solution.

This dilatation and irrigation must be repeated every two or three days at first, then at longer intervals, as improvement takes place. It is important that the entire vulva and vagina be kept in an absolute state of cleanliness, which is easily done by instructing the patient to irrigate the vagina daily with soap and water, and a fountain syringe.

While these cases require weeks of tedious treatment, which might become burdensome to both the patient and the physician, nevertheless the result produced will fully recompense them both for the time and labor expended.

39 Wright Street.

[Written for the MEDICAL BRIEF.]

Human Perfection.

BY D. W. LOREE, M. D.,
Ridgeway, Mich.

While but few have any adequate conception of what constitutes a perfect man, it is pleasing to the average mind to believe that man is the noblest work of God, that he is fearfully and wonderfully made, that he is an image of Him who presides at the Supreme Court of the Universe; and especially pleasing to believe that he has capabilities and powers of endowment which qualify him for an endless advancement in knowledge and happiness, with opportunity to profit by his ever-increasing store. While this may be true, it would seem not to be of universal application. As we look abroad we behold on every hand scenes of suffering, misery and degeneracy, sometimes without even a mark of nobility, and with the divine image so blurred and defaced as to give no hope under present conditions of servitude to death. Even after six thousand years of human history, there is not a man upon earth, in his right mind, who for himself would claim either physical, mental or moral perfection.

Perfection implies perfect human nature, with mind and heart in full harmony with principles of righteousness and the golden rule, with capacity to reason rightly, wisely in respect to the laws of that perfect life, and with an obedient heart up to the full measure of a perfect man's ability. But so long as the world of mankind are on the toboggan slide of death because of sin and selfishness, wherein shall we center hope for the ultimate attainment of, or restitution to, perfection of life?

Its attainment implies a return from this deathward sweep, upon a plane of increasing sliminess, from this dying condition of sin and selfishness, up to full perfection of life here upon earth. With this view of the situation, and with a full appreciation of the term "human perfection," all must agree that death must be abolished before the goal can be reached. Is there a member of the race who can hope to reach that high estate without some further demonstration of divine power than the world has yet known? And can that demonstration be anything less than such a shaking of human institutions and sifting of human philosophies as will bring the world of Christendom upon bended knees, with all tongues confessing to the glory of God, for the perfection of His character, in wisdom, justice, love and power?

Perfection of nature, physical, mental and moral, is a possibility for the great majority of mankind, while not a certainty for any; because its attainment will require a reign and rule of righteousness in mind and heart, as well as a right use of every reasoning faculty, and wisdom from a source beyond that which nature can supply. He who claims nature for his only God has a God without sentiment, and fails to reason rightly. He reads the book of nature imperfectly who fails to catch a glimpse of nature's God, from whom alone cometh the "spirit of a sound mind." Soundness of mind, as exemplified in the right use of reason, is one of the first steps towards perfection.

But the man must have such an appreciation of the prize as will lead him to desire it, and to put forth an effort to obtain it, by a hearty submission to all requirements necessary to enter the race.

It is well to remember that because of prevailing and long-continued human *imperfection*, and the unhappiness of mankind, that the world is yet very much in darkness as to the ultimate outcome.

Civilization's high degree of development, through discovery and human research in bringing the elements and principles of nature into use is so wonderful, so amazing, as to blind the eyes of the understanding of the busy world in respect to that "true light" which is yet only as "a light shining in a dark place," "a lamp to the feet, a lantern to the pathway." Some one has truly said that the world of mankind—"the groaning creation"—are like children crying in the night time, waiting, watching, hoping for the coming of a new day.

We have abiding faith in the teaching that the first man came into being as a "Prince of God," in full perfection of life, capable of living everlastingly upon condition of daily receiving a supply of life-

sustaining elements, and continued obedience to the law of his life, the will of God, with whom he had communion and fellowship and instruction, which qualified him to discern as between right and wrong in their application to himself and others; that he was made acquainted with the baneful results of evil, and of the blessed results of righteousness; that he had freedom of choice, or will, in regard to his own conduct, though, practically, without experience in the affairs of life.

It is not to be supposed that the progenitor of the race had all the intellectual grace and moral refinement here and there exhibited among men to-day, but that he was perfectly endowed, perfectly adapted to a complete performance of all the purposes of his being, of all the requirements of his day and generation.

It is but a reasonable proposition that the first man had, of necessity, to be put upon trial for a continuance of his high estate, his perfect life, his high endowments, his dominion of earth, his rulership over all the living forms about him; reasonable, also, that his Author, God, would be equal to the emergency of failure resulting from that trial—at the same time it is but reasonable to believe that that first man, who failed when the world of mankind were in his loins, will, after his awakening, have another trial with full opportunity under more favorable conditions, and that he will be abundantly qualified to profit by his former experience of nine hundred and thirty years in the pit of death.

It is in harmony with all the various doctrines of all the various books of the Bible that no member of the family of Adam will attain to perfection of life, either upon the spiritual or upon the human plane, without trial in judgment. Failure to recognize the truth that Christians only were on trial has led the nominal church into many confusing errors, while her failure to differentiate as between everlasting life, though liable to death, and that condition of life termed immortality—inherent life—is an unmistakable evidence that she is not shedding forth the true light of the knowledge of God in His complete and perfect plan for the development and salvation of mankind.

Although it may seem to be contradictory to the foregoing statement, yet it is profoundly true that the nominal church, through sectarianism, is now and has been during the past, grandly, though blindly, filling up all the divine purposes of her being, while rapidly approaching the end of her career. Orthodox theology, so-called, teaches nothing, knows nothing, in respect to human perfection, having lost sight of the "faith once delivered to the saints." The foundation of that faith includes the sure knowledge of the coming "earthly phase of the kingdom of God" for the special purpose of blessing unto perfection "all the families of the earth," by and through the right hand of power from on high.

This teaching is in harmony with the voice of Him who speaks from heaven through His Word, in harmony with the teaching of the "Church of the Living God," "the Church of the First Born," "the pillar and ground of truth," not man made, nor man ruled. It is the teaching of them of "no sect in religion," of whom the most widely-known living exponent of divine Truth is Chas. T. Russell, Allegheny, Pa.

[Written for the MEDICAL BRIEF.]

Why Do Medical Incomes Decline?

BY H. SPEIER, M. D.,
Rochester, Minn.

A friend, a leading practitioner in a city of seventy-five thousand inhabitants, speaking, in a private letter, of an evident decline of medical incomes in that city, finds a reason in the fact that so many of the best families, who used to supply an appreciable portion of the annual income, have been lost, having become Christian Scientists. This is, undoubtedly, a correct idea, and will be subscribed to by many physicians in all parts of the country, for everywhere has a certain shrinkage in incomes become apparent. But why is it that so many of the most intelligent people among the laity turn from rational medicine and take up irrational facts? The medical profession itself is largely to blame for it.

For one thing, we have gone mad on surgery, and are going madder and madder every year. The great technical advances growing out of asepticism, the many cures accomplished by modern surgery, the great financial returns obtained, and enviable reputations built up by surgeons in all parts of the world—all have combined to raise surgery to the highest pedestal and make it appear as the crowning glory of the healing art.

No one who has not, as the writer has had the opportunity of doing during the last two years, traveled over considerable territory, visited physicians and studied the conditions of medical life and practice, can realize to what extent the profession worships surgery and the surgeon. Every young man, fit or unfit, aspires to be a surgeon, and can see in his patients only surgical "cases." You must have, at least, a dozen appendices, a bottle full of gall-stones, and a few extirpated uteri to show before you can ask to be heard, just as the young Indian warrior could have no voice in the councils of his tribe until he had a number of scalps at his girdle. Ask what kind of a man is Dr. J., in the neighboring town, and most likely you will be told, "Oh, he does not amount to much, he does no surgery at all."

Once a physician was valued by his confreres in proportion to his general wisdom and knowledge of therapeutics; now it is boldness and mere manual skill which give him high standing. The spirit has been imbibed by a large part of the general public; but many, and those the most intelligent, shrink from the blind worship of surgery and its dangers, and turn to other, milder methods of healing, such as osteopathy, Christian Science, etc. About six million people have thus ceased to contribute to the support of the medical profession.

Close kin to this over-valuation of surgery is the contempt of therapeutics which the present medical generation affects. Not a mere affectation, either; it is inbred through defective college training. The charge that they neglect the teaching of therapeutics and fail to give students a proper knowledge of drugs and their uses, has been brought against our medical colleges so frequently, and from so many sides, that it is needless to dwell on it now. The result is painfully apparent in daily practice. Hear these younger men discourse learnedly to their patients on the germs infecting them, minute pathological changes, toxins, the opsonic index, etc. But when it comes to the question of treatment they dismiss it with an off-hand, "Oh, you may take a dose or two of quinine, or a little calomel," or this, that, or the other, conveying by their manner the impression that treatment is of no consequence or interest whatever. But to every sick person it is of cardinal importance. His physician's indifference drives him to where, at least, a show is being made of caring for him to the osteopath, Christian Scientist, or others. This is one of the blessings brought to us by the therapeutic nihilism which dominates medical education to-day, and the chief apostle of which is Professor Osler.

Diagnosis is the thing, anybody can apply the treatment, is the frequently heard confession of faith of the followers of Osler's teaching. Diagnosis, to them, is chiefly the laboratory variety. The microscope, blood count, bacteriological test, all the new instruments of precision are very valuable additional helps, but the modern American physician puts too much dependence on them. He has come to look upon them as infallible, placing the pathologist and laboratory worker on an exalted plane, at the expense of the other diagnostic methods of percussion, auscultation, and purely clinical bedside observation. Their place can be taken by nothing else. Laboratory diagnosis is tending towards mechanical, machine-like accuracy. But, as yet, it retains too many elements of uncertainty and possibilities of error. The best men are recognizing this. Dr. Richard Cabot, of Boston, has, in some widely-discussed papers, pointed out the fallacies of the clinical examination of urine. James B. Herrick, of Chicago, in the oration on medicine before the last meeting of the A. M. A., calls attention to, and warns against over-reliance on laboratory diagnosis. Strimpell and Van Noorden, in Germany, in recent lectures, emphasize the need of more thorough teaching and application of the methods of physical examination, and a

professor of the University of Berlin, lately returned from a visit to our country, criticises us for making a fetish of laboratory diagnosis. This super-scientific craze leaves the young physician less ready to meet the demands of ordinary, everyday practice, and helps to drive his patients away.

The encroachment on medical incomes by badly-managed medical charities, has been and still is a favorite topic of discussion in medical journals and societies. It is a serious evil. No relief has, as yet, been afforded, and none need be looked for, until social conditions in general have been remodeled.

Another cause, equally well understood and, apparently, equally hopeless, is the unnecessarily large number of medical colleges and never-ceasing over-supply of physicians they send out annually. It was thought that raising the standard of admission to medical schools, lengthening the course of study, increasing materially the cost of it, and requiring additional State examinations, would force out superfluous schools and limit the number of students, but no such result has followed. While the cake is getting smaller, the number of partakers is not lessening. Who can suggest the remedy?

Social advances of recent times are chiefly in the field of sanitary improvements, such as the better housing of the poor, furnishing wholesome milk for infants, purifying the water supply of cities, organizing the fight against tuberculosis; in short, removing the cause of disease. All these movements have been originated by physicians, and carried onward by them, often against bitter opposition from those most benefited, giving freely to the public from their special knowledge, and creating an entirely new science, that of preventive medicine. The medical profession occupies, in this respect, an unique and anomalous position. No other calling shows such an unselfish, genuinely altruistic spirit. For this work, upon which we unite our best efforts, the prevention of disease, must make, in the end, the present-day physician altogether unnecessary. We are cheerfully digging our own graves.

A number of factors contribute to reduce the average income of the average physician, and make his existence more and more precarious. Some are avoidable and remediable, being founded on misconceptions; others are not, being manifestations of universal social tendencies.

[Written for the MEDICAL BRIEF.]

Entero-Colitis—Enteritis.

BY EDWARD C. ROTHROCK, M. D.,
Ex-Surgeon of the Confederacy.
Palestine, Texas.

Modern writers have divided the alimentary canal below the stomach into three sections in relation to inflammation and designated that affection as it occurs in those different sections by the following terms: Duodenitis, for inflammation of the duodenum; enteritis, for inflammation of the jejunum and ileum; colitis, or dysentery, for inflammation of the large intestines. The first of these, the duodenum, I shall not discuss separately, as the duodenum is seldom diseased alone, and if it is, no indications of treatment differ from that pertaining to the affections where the stomach and intestines are involved. Therefore we shall apply the term enteritis to inflammation of any portion of the mucous membrane of the small intestines. The inflammation of which this paper will notice is most frequently located in the ileum, and by some writers denominated enteritis, by others ileo-colitis, entero-colitis, etc. As the colon is apt to be more or less involved when the ileum is inflamed any length of time, extending by continuous sympathy to other portions of the mucous surface of the tube, hence inflammation of the small intestines, and especially of the ileum, is most always in protracted cases. extended to the colon, with the diagnostic symptoms. The two extremities of the small intestines, the duodenum and ileum, are more liable to inflammation than the jejunum, the duodenum is in more direct association with the stomach and liver, and more liable to be sympathetically affected when they are diseased, the ileum being in a position which will account for its liability

to irritation and inflammation. The diminished caliber of the ileum, at its lower part, and especially at its entrance into the cecum through the ileo-cecal valve, is calculated to retard the process of the intestinal contents, holding them longer in contact with the mucous surface, and thus subject it more to the action of an irritating substance that may be present than in the upper portion of the intestinal tube.

Inflammation of the mucous membrane of the small intestines usually commences with uneasiness, often obscure in the commencement, but gradually increasing, until pains of a griping character, more or less constant, is felt about the center of the abdomen. The most severe pain will be felt in paroxysm, with sensation of distress between them. The griping is so severe in children sometimes as to cause convulsions, and in adults the suffering is often very great. In mild cases there is but little pain; again, the pain, instead of commencing gradually, is violent at first; the pain is felt about the center of the abdomen, or umbilical region; depending in some measure, on the locality of the attack. If it is in the duodenum, or first portion of the jejenum, the pain will be felt higher, more deep-seated; perhaps referred to the back; whereas, if the ileum is the part affected, especially the lower portion of it, the pain will be in the hypogastric, extending also into the right iliac region, and frequently pronounced by some over-wise surgeons, who wish to carve, "appendicitis." There is more or less tenderness under pressure, corresponding in measure to amount of pain experienced, and this serves better than any other in fixing the location of the inflammatory lesion. Diarrhea is a common symptom of enteritis, and rarely absent, unless in cases where the disease is caused by obstruction. If this symptom has not appeared, it may at any time be easily produced by even mild purgatives, which should be used with great care and judgment. The evacuations are peculiar, and their character should receive attention. If the disease is confined to the small intestines, they will be watery, and of a dirty yellow color, containing but little mucus, but if the colon is involved, there will be more mucus, and often mixed with blood in the discharges; an extension of inflammation into the colon will also be marked by tenesmus, and more severe bearing-down pain, or dysentery, in addition to the griping, twisting and cutting pains of enteritis. At first the stools will be fecal, mixed with matter, but when it passes off they will assume the sero-mucous type. In some cases the stools are decidedly bilious during the progress of the disease, indicating that the liver has taken on a sympathetic action, and is more apt to be the case where the duodenum is involved in the inflammation, or becomes highly irritated. Commonly there is a deficiency of bile in the evacuations. When bile is present it is apt to be charged, and impart a greenish color to the dejections. It is, therefore, important to give special attention to the character of the evacuations, as much is to be learned respecting the real condition of the patient, the amount of bile, its character and other peculiarities of the stools in disease of the bowels, and will serve as a basis of a true diagnosis. The bowels are not usually bloated or distended with gas, to the extent of producing tympanitic symptoms, but occasionally, and especially in children, and in protracted cases of adults, this symptom is present; generally at first the abdomen is in a collapsed, or sunken condition. The bile symptoms are present in all cases of enteritis, and it is common to find the fever exhibiting the remitting type, assuming the initiatory symptoms of "bilious fever," presenting, more or less, marked remissions. This complication of enteritis, with periodic fever, is especially frequent in malarial locations. If such is the condition, there should be no hesitancy as to the course to pursue. Arrest the periodic fever before anything else, with antiperiodics, and the inflammation will yield at once. Diarrhea, depending upon the mere debility of the bowels, local irritation, or atony of the intestines, in which there is no fever, or very little, is not included in this paper. The febrile symptoms in enteritis are not as intense as in many other cases of inflammatory disease. The pulse is some-

what accelerated, but open and full; very unlike the rapid, quick pulse characteristic of peritoneal inflammation. The skin will be more or less hot and dry, the tongue moist and slightly coated, and the urine scanty and highly colored. The febrile symptoms sometimes precede those of local disease, in which cases they are usually more prominent, as the reaction is apt to be much greater. As a general thing the character of the disease is mild, and prognosis favorable, where there is little pain, diarrhea, or fever, and it usually terminates in health in a short time without, or with very little treatment—rest, diet and good nursing. Where the symptoms are severe, it will generally yield readily to simple and appropriate treatment. Whether the inflammation is primary attack, or secondary one, resulting from fever, and some cases of the latter description, especially under improper management in the beginning, assume a grave, untoward condition. Where this is the case, and, indeed, where from any cause the disease assumes an unfavorable aspect, the symptoms become aggravated, the pain increases as the inflammation extends; the discharges become more offensive; the colon becomes involved, with all the symptoms of dysentery, or the stomach becomes implicated, as manifested by nausea, vomiting, pain and tenderness in the epigastrium; the skin and eyes become yellow, indicating involvement of the liver, or closure of the bile-ducts; the tongue becomes red and dry; the brain and nervous system are affected; delirium, perhaps, appears; the pulse is frequent and feeble, and the patient gradually sinks from exhaustion, or suddenly dies, owing, it may be, to perforation of the intestines, or to mortification. If the case does not prove fatal, it may run into the chronic form of inflammation, or the patient may recover after a tedious and prudently-managed convalescence. The causes of enteritis are numerous and various. A very common cause is exposure to cold; "taking cold," getting wet in a shower, the sudden vicissitude of temperature which destroys the equilibrium of the system, and develops disease at the weak point; another cause is the sudden recession of eruptions from the surface. This is especially frequent with children that have any of the exanthematous diseases, or the eruption commonly called "rash"—which is, itself, dependent on gastric and intestinal derangement. It is said to result from metastasis of gout and rheumatism, which is not at all improbable. It may result, also, from the suppression of accustomed discharges. Another frequent cause of enteric diseases is the presence of irritating substances, indigestible articles of food, which, having resisted the action of the stomach, have passed in a crude or slightly altered form, into the small intestines, where they irritate the mucous membrane until inflammation is developed. Acid or morbid secretions, especially vitiated bile, are doubtless often the cause of inflammation of the bowels. Accumulation and induration of the ordinary contents may occur from inactivity of the bowels and produce inflammation. Relaxation, resulting in intussusception, or imagination and strangulation from hernia, etc., are also causes of inflammation of the small intestines. Enteritis is a frequent attendant on other affections, general or local, as fevers, whether malarial or contagious; consumption, gastritis, hepatitis, etc. The specific tinctures are used in all cases, and dose is for adults in this paper. Indications for treatment is rest, diet and good nursing. If fever is high, spec. tinct. aconite one drop every half-hour, or every hour. Use it frequently thus: spec. tinct. aconite twenty drops, aqua four ounces; teaspoonful, as above, until fever is reduced, then every two or three hours. Aconite will antagonize the fever process, and is a valuable drug in fever produced by inflammation. Its power over the circulation, respiration and transpiration is marvelous, when rightly used, in small doses. It is prompt, and sure to reduce fever, relieve pain. In high fever, a resisting pulse, hot, dry skin, frequent discharges from the bowels, we give this frequently with success: Spec. tinct. aconite one drop, gelsemium eight to ten drops, every two or three hours, or every hour until the effects of the aconite are felt upon the frequency of the pulse, and ef-

fect of the gelsemium are seen upon the eyes, then give it at longer intervals. If the case has not been seen at first, and the symptoms are grave, violent colic-like pains, great tenesmus, and the discharges frequent, offensive, ill-smelling, with little mucus, antiseptics are used. Baptisia three to five drops every three hours, until the stools cease to be offensive. If the colon is implicated, manifested by passage of large amount of blood—dysentery—hamamelis tinc., in doses of ten drops, should be given every hour or two until the hemorrhage ceases. Geranii—crane's bill—is also a nice remedy, and has a pleasant taste, therefore suitable for children. If there is nausea and vomiting, with or without bloody evacuations, and tenesmus, small doses of ipecac tinc., and podophyllum, two drops, each every hour, or half-hour, will check it. We have frequently used arsenite of copper 1/100 grain, water four ounces; a teaspoonful every twenty or thirty minutes, and it acts like a charm. If the upper intestines are bound up, a mild aperient, as cream of tartar, epsom salts, or rochelle salts, are used in small doses. The phosphate of sodium is efficient. Aromat. syrup rhubarb is a fine remedy, particularly for children; dose for which is ten to thirty drops; adults teaspoonful; small doses should be given once or thrice a day, as indicated, and should be used every day or two to keep up action of the upper bowels, which will materially aid in the cure. Aconite and bryonia-alba will reduce fever, tenesmus and pain. So will gelsemium. If there is evidence of periodicity in the fever, then quinine and other appropriate remedies must be used, as these malarial properties that frequently maintain and perpetuate the disease must be aborted at once, then the disease is easy to control. Where the bowels are distended with gas—tympanitic—dioscorea—bile, tinct. twenty-five drops, mint water four ounces, teaspoonful every one or two hours, will relieve. Warm poultice of flaxseed meal, or corn meal spread thin, so as not to be heavy, will give comfort and great relief. Turpentine, sprinkled here and there on the poultice, will enhance their effect greatly. Diet should be light and easy to digest; liquid or semi-liquid food should be used; fresh milk which contains in itself all that is required for the wants of the organism. There is in it fat, nitrogenized matter, sugar and salts. It is palatable when fresh, and relished by most persons. In conditions of great debility, and in early convalescence, milk is the food par excellence; it supplies nutriment, both plastic and respiratory. Milk may be thickened with corn flour, then an egg beaten up with it; sugar added. This is excellent in gastric-catarrh. When indicated, alcohol may be added to milk—a punch, as the famous "rum and milk" preparations. Buttermilk is an agreeable beverage to most persons. The milk—sugar has been broken up into lactic acid, soft-boiled eggs, soups, light-bread and fresh butter; light-bread milk toast, as a change. Beef tea, with sago, or arrowroot, is a good diet. Biscuit powder, or fine bread crumbs, and a little fresh butter, with pepper and salt to taste, or fine bread crumbs added to beef tea, is nutritious. A pleasant diet is rice water, the well-known "cungee-pawnee," boiled rice and milk, beef and chicken soups, mutton broth, are suitable in most cases. Tea and coffee may often be used to advantage. Coffee is a useful stimulant in affections of children. Wine whey is of great use, and very nourishing.

The administration of stimulants, alcoholic or nitrogenized, should always be in proportion to the reserve fund of the system, and the urgency of the emergency.

[Written for the MEDICAL BRIEF.]

Toxins and Antitoxins.

BY G. A. PERSSON, M. D.,
Mt. Clemens, Mich.

The kind invitation to contribute a paper for your esteemed journal was an unexpected honor, and I take great pleasure in complying with your request.

The subject which to-day is occupying the mind of the medical men, perhaps, more than any other subject, in medicine, is that of Toxins and Antitoxins.

Recognizing the fact that germs do bear a causal relation to some diseases, the question arises, How do these organisms produce disease? In what way does the

Kleb's-Löeffler's bacillus, for instance, induce the symptoms of diphtheria and death? Many answers to this question have been offered. Some of the most important ones are as follows:

Bollinger has suggested that it was due to the deoxidation of the blood by the micro-organisms, and another theory would have us believe that the germs consumed the proteids of the body, and thus deprived it of sustenance. The proteids are known to be necessary for the building up of cells, and it is also known that germs feed on proteids. Still another theory, which has been offered, is that the bacteria destroys the blood corpuscles, or lead to their rapid disintegration.

Seeing the vital deficiencies of the above theories, and being impressed by the results obtained by the chemic study of putrefaction, bacteriologists have been led to inquire into the possibility of the symptoms of infectious diseases being due to chemic poisons. In investigating this theory three possibilities suggest themselves.

1. The micro-organisms themselves may be poisonous, or the poison may be an integral part of them. Nelson advocated this theory at one time, thus accounting for the appearance and increase in violence of the symptoms as the germs increased in number. In order for the conditions of this theory to be fulfilled, the germs must be present in the blood before the symptoms appear, but we find, in many of the infectious diseases that the micro-organisms which induce this disease are not found in the blood at any time. It has also been proven, experimentally, by Hoffa, and others, that injection of a large quantity of anthrax bacilli, directly into the blood, is followed by no symptoms for from twenty-four to seventy-four hours; while, if this theory was true, we would naturally conclude that symptoms of the disease would follow immediately, and death would be speedy.

2. The micro-organisms may be intimately associated with, or may produce a soluble ferment, which, by its action on the body, produces the symptoms of the disease, and death. This theory formerly had many ardent supporters, among whom may be mentioned the eminent scientist, DeBary. But Pasteur proved the theory false when he filtered anthrax blood through earthen cylinders, innoculated animals with the filtrate, and failed to produce any effect.

3. Poisons may be produced by the cellular activity of the bacteria, much in the same way as morphine is formed in the poppy. This theory finds, in the first place, strong support in the well-known fact that many of the putrefactive germs produce highly-poisonous bodies; and, in the second place, the formation of the chemic poison will account for the appearance of the symptoms of the disease when the living micro-organisms never find their way into the blood.

The correctness of this theory has been tested by a large number of investigators, and with the result that its truth has been firmly established.

An infectious disease arises when a specific, pathogenic micro-organism, having gained admittance to the body and having found the conditions favorable, grows and multiplies, and in so doing elaborates a chemic poison called toxin, which induces the characteristic effects.

What are these effects? They produce the development of clinical symptoms which we have learned to arrange into groups, and from the peculiar arrangement of these symptoms we diagnose the disease, and build our hypothetical prognosis.

The cardinal symptom in all acute infectious diseases is the temperature, and no other one symptom is watched with such close attention by the attending physician. It may, for this reason, not come amiss if we here briefly consider what relation the toxins bear to the temperature.

Pyrotoxin is found in all kinds of bacteria, both pathogenic and nonpathogenic, and there seems to be no relation between the quantity of this substance contained in the bacterial cell and the pathogenic action of the living germ. Pyrotoxin is a constituent of the bacterial cell proper, and not a split product formed by analytic action of the bacterium on constituent of medium, in which it grows. Pyrotoxin, when prepared from a fresh culture, is a

grayish-white substance that appears under the microscope in form of fine granules. It is very hydroscopic and decomposes after a short exposure to the air. It is soluble in water of neutral, feebly alkaline to feebly acid reaction. Pyrotoxin causes the elevation of temperature, and induces the complex of symptoms included under the term of fever.

The special toxins formed by the specific germs, which now are regarded to be the cause of many of our prevalent diseases, have been extracted from these micro-organisms, but space does not here permit me to give even an outline of this instructive and interesting subject. Fraenkel has been successful in extracting from the Kleb's-Löffler bacillus a poisonous albumose, of which 0.15 gram was sufficient to kill a guinea pig within eight minutes. Pfeiffer finds that the toxin in typhoid fever is contained in the bacterial cell. He has, from culture of the Eberth bacillus, extracted a poisonous proteid. With this poison animals can be rendered immune to the Eberth bacillus, but not the bacillus colicommunis. This typhoid antitoxin is also present in the blood in persons convalescing from typhoid fever.

When it became known that some of the specific pathogenic germs elaborated poisonous substances which were the direct cause of many diseases, the energy of many honest toilers in the laboratories of science was bent upon the discovery of some antidote for these toxins.

The brilliant success of Jenner with vaccination against small-pox, and the great achievements of Pasteur in hydrophobia, have given ground for the hope that like results may be secured in protecting man from other diseases.

To establish immunity against such deadly infectious diseases as tetanus, typhoid fever, pneumonia, diphtheria, cholera and tuberculosis, or to abort an attack of these diseases by the administration of suitable antitoxins, are complexing problems with which the student of scientific medicine does to-day busy himself.

In order to properly understand the action of antitoxins, we will consider, for a minute, the subject of immunity.

We are all well familiar with the Metchnikoff's phagocyte theory. The term "phagocyte" implies any cell which is capable of incorporating bacteria, and destroying them by a process of digestion. Bullock states that thousands of facts points to the conclusion that our leucocytic-forming tissues are our great defensive organs against parasitic invasion, but that the mystery is how the microbes are destroyed.

The view that the serum was endowed with bactericidal powers has been ably defended by Pfeiffer, von Foder, and others. Their labor led to the doctrine of which the late Professor Hans Buchner is the main exponent. Both he and Hankin isolated substances which they termed alexins, and to these bodies they ascribed the power to confer immunity. They were also thought, by Buchner, to be derived from the leucocytes, the oxyphil, and kindred cells. Gruber was led by a large number of experiments to conclude that the actual destruction of bacteria, in all animals, whether actively or passively immunized, was due to the Buchner's alexins, and that the alexins were general protective substances, entirely without specific action. According to Gruber, the bacterial cell was first made adhesive by the blood's agglutinans, and thus made vulnerable to the destructive action of the alexins.

In 1897 Ehrlich advanced a theory, called the Ehrlich's side-chain theory, which aims to harmonize the results so far reached in the study of natural and artificial immunity, and particularly the formation and mode of action of the immunizing constituents of the blood serum. Reduced to its simplest expression, Ehrlich's theory is not, on the whole, a complex one, and it is based on recognized biologic and chemical principles.

The body, being composed of colonies of cells, which differ from one another in their functional attributes, nerve-cells, muscle-cells, gland-cells, etc., we speak of the specific action of drugs. Thus, the cerebro-spinal motor cells have affinity for strychnine, the cardiac muscle cells for digitalis, the sweat and salivary, jaborandi, etc. Now toxins differ in no way from remedies in this particular; they are specific, owing to their cellular affinities, toxin being also taken up by specific

cells. This specific action of toxins represents the foundation upon which Ehrlich's theory is poised.

The theory itself is based upon the mechanism of cell nutrition in its relation to its mode of production of specific antitoxins, bactericidal and antitoxic sera.

The complexity of cellular protoplasm is well known to biologists. Ehrlich assumes that each cell contains an active central nucleus, and a group of molecules or side chains. The outside, or extranuclear group, constitute the cardinal feature of the entire scheme, since each of them has for its function to receive (hence the term receptor) the molecules of foodstuff, which perpetuate the cell existence. These molecules Ehrlich calls heptophores, owing to their identity as extrinsic carriers. A cell nutrition is thus carried on through the affinity its receptors, or side chains, have for its heptophores. Unfortunately, the receptors do not combine with these nutrient substances only; their affinity extends to substances which are, in measure, their chemical analogues, and which may include harmful bodies. Thus a poison, a toxin, or a venom, may contain the same elements, and the same number of them as a nutrient molecule, or heptophore, the only difference between the latter and the pathogenic molecule being a different arrangement of their respective atoms (isorism). The formula of turpentine, for instance, is C_{10} H_{16}, while that of oil of lemons is also C_{10} H_{16}, and yet their properties are quite dissimilar. The same may be said of ethyl formate, methyl acetate and propreonic acid, all of which have a molecular weight of seventy-four, and the same formula, C_3 H_6 O_2. This makes it possible for a cell to take up (combine with its nutrient heptophore) any number of isomeric non-nutritious bodies, and when one of these happens to be toxic, thus forming what Ehrlich calls a toxophore, the latter combines with the cell, and, if sufficiently active, qualitatively and quantitatively, may act destructively upon it.

If the toxin is not sufficiently active to destroy the cell or inhibit its functions, the latter seeks not only to rid itself of the poison, but also to protect itself against further aggression from this poison and its isomers.

Intoxication being due to toxins, for instance, the toxin group of hepthophoric molecule attaches itself to the receptors, and then reacts actively upon the cell proper. The receptors themselves being destroyed, the cell not only replaces them by reproduction, but the process is so active that many more receptors are created than are required by the cell itself, and they accumulate in the blood and lymph. These surplus receptors preserve their affinity for their specific heptophores, and, therefore, for any isomeric toxin that may combine with it. The receptors thus become the cell's protectors, since they capture and hold, as it were, the toxin before it can at all reach the cell proper, thus immunizing the latter against the poison.

Diphtheria toxin, for instance, by exciting the cells for which it has specific affinity, causes these cells to liberate receptors in large quantities; these, by at once combining with the rest of the toxin in the blood stream, curtails its morbid effect. Antitoxin, therefore, owes its curative properties to the receptors it contains.

Less this paper be burdensome by its length, I will close by recalling to your memory the commercial preparation of antitoxins.

It is, of course, common knowledge that an antitoxin is the blood serum of an animal after the latter has been rendered highly immune by repeated injection of appropriate toxin.

The horse is chosen for immunization because of its marked ability to yield antitoxins, because of its size withstanding much loss of blood, and because of the readiness with which it submits to manipulation.

Manufacturing plants which produce antitoxins and other antiserums on a large scale, have splendidly-equipped stables which are kept in a maximum hygienic condition, and from which rats are particularly vigorously excluded. The horses are carefully groomed and fed, and given such exercise as will keep them in healthy condition.

The toxins in solution are injected subcutaneously. Grave and even fatal results may follow the first injection if the toxins have been given in too large doses, or in too concentrated solution.

It is of great importance to establish, first, what the Germans call grundimmunitat, which means primary immunity in the animal itself, so that the immunization may then be pushed *vigorously*, until the blood contains antitoxins of high concentration. For this purpose it has been found necessary to weaken the first toxins injected. This may be done by heating the toxin for about an hour at 70° F. Gradually, the virulence and the amount of antitoxin may be increased until, finally, the full virulent toxin is given in large doses. The increase in dosage must be gradual. Eventually, as much as a liter or more of the diphtheria toxin can be tolerated.

Following each injection a reaction occurs. With diphtheria the local swelling may be great, and sloughing may occur. Following an injection of tetanus toxin, the tetanic symptoms may appear. In either case, there is some loss of weight, and often fever. The next injection is not given till the fever has subsided, and the original weight is restored. This interval is, usually, from eight to fourteen days.

From two to three (and sometimes more) months of such treatment are usually sufficient to produce antitoxin of high concentration. At the end of this time blood is drawn from the jugular vein by means of a large trocar, to which a rubber tube is attached. The tube leads to a tall glass cylinder, holding from one to two liters, and into this the blood is allowed to flow. Six liters may be safely drawn from a horse of average size. The most rigid asepsis is, of course, observed in collecting the blood. The glass cylinders, appropriately covered to prevent contamination, are then set aside in a cool and dark place, and, after the serum has separated from the clot, samples are taken to be tested for their antitoxic value.

The necessity of standardizing antitoxin, so that the dosage may be controlled accurately, is self-evident. To meet this need the antitoxin unit, familiar in practice, was devised. It was necessary to decide, first, on some arbitrary unit of measure. The only way there is to estimate the value of antitoxin is its ability to neutralize its corresponding toxin. Consequently, to standardize antitoxin it was necessary to first devise some unit of measure for the toxin itself. For this purpose the Behring's toxin unit is generally used. A diphtheria toxin was designated normal when it was such strength that 0.01 cubic centimeter would kill a guinea pig weighing two hundred and fifty grams, in four days.

Measuring the antitoxin on the basis of the toxin unit, it has been determined to consider an antitoxin of normal strength when 0.1 cubic centimeter will protect a guinea pig of two hundred and fifty grams against a one hundred fatal dose of diphtheria toxin. This value is called antitoxin unit.

The indications for the use of antitoxins, and the technic for the administration, together with the correct dose in each case, are facts which every practitioner should be perfect masters of.

I will not detain you with the details thereof, because I know you are all familiar with them.

If I have, in some way, been successful in presenting to you a few of the many interesting facts which go to make up this important subject, the purpose of this paper has been accomplished.

Denver Building.

[Written for the MEDICAL BRIEF.]

That Old, Too-Well-Trod, Beaten Road.

BY E. B. SILVERS, M. D.,
Rahway, N. J.

Our profession is too much given to keep, like a locomotive, on the same old track. If some physician or surgeon of Vienna, Paris, Germany, or some other foreign country of note, sends forth some new theory, the prestige of their name often attracts enough to insure a trial, too often futile. But if an intelligent country practitioner, of careful observation, recommends, after careful trial, some new theory tried to the extent of many successful issues, it falls flat, as the

source is not appreciated; yet the most successful results in the arts and mechanics have risen from such obscure sources.

The writer, many years ago, tried successfully sulphite of calcium to saturation as a prophylactic, as well as a modifier of measles when established. The experiment was well tested among adults, where this disease is most virulent. Well-authenticated cases were proven of its efficacy and also of its modifying effects in small-pox, preventing pitting, externally using an ointment of one drachm calamine, one ounce basilicon ointment, four drops of carbolic (pure) acid. But it comes from an obscure country doctor, and, consequently, attracted no special attention, and my belief is that in all eruptive diseases this is a reliable remedial agent. Next, that salycilate of soda, in five-grain doses, four times a day, will dissolve gall-stones and prevent hepatic colic. I go further and state that this same agent will dissolve some forms of stones in kidney and bladder, but who will try them, when the source of the discovery is traced to non-celebrated sources? In a practice of fifty-four years, of careful observation of means to a successful ending, I claim that all mature physicians must have struck some valuable curative means of service to the profession. I do not suffer the diffidence which controls so many.

[Written for the MEDICAL BRIEF.]

My Front Door Key.

BY B. E. DAWSON, M. D.,
Belton, Mo.

One morning, recently, when I arrived at my office door, I had to search through a small bunch of keys to find the one I needed, on account of its diminutive size. This reminded me, by contrast, of the key to my father's factory door, in use more than forty years ago. The key to my office door weighs one drachm, and is less than two inches in length. The key of my youthful days was a large, complicated, club-like piece of iron, that weighed three or four ounces. I remember that each business house in the village had a key similar in size.

In those days we thought protection was in proportion to the size of the key, but we have learned better. My office door is heavier, the bolt larger, and the lock more difficult to pick, than were those of my father's.

This line of thought was followed into the various fields of the then and now, until I was overwhelmed and charmed with the beauty, the utility and the potency of the little key to the large front door. Some of us are slow to learn, but many are beginning to use the little key to accomplish great things in the different departments of life. Like Elijah, we must learn that God's power was not in the tempest, nor the earthquake, nor the sheets of fire, but in the still, small voice. In olden times, God thundered from Sinai, "Thou shalt," and "Thou shalt not;" but now he says, in the still voice of the Gospel, "Blessed are they that do his commandments."

The bells, springs and cords have given place to the delicate push button, so that with the tip of the finger we can arouse the occupants of a large building. The President, in Washington, may turn the little switch-key, and start the wheels of ponderous machinery in a distant city. The little child's delicate finger may touch a key and blow up Hell Gate.

When we enter the realm of our profession we also observe the efficiency of the small key. Blacksmith tools are not used to repair a gold watch. The machinery of the human body is far more delicate and nicely poised than any chronometer; its repair usually requires small tools and delicate touch, or irreparable damage may result.

My first observance of the science (?) of medicine and surgery was the large dose of calomel, and the big clumsy turn-key, or twister, for extracting teeth. It seemed to me, if I stubbed my toe, or had the stomachache, the headache, or hives, my father gave me nearly a teaspoonful of calomel. The way he got teeth out with his elevators and turn-keys, and bled patients, was a sight long to be remembered, if one could bear to look to the completion of the fearful ordeal.

When we look back on memory's page at the large, nauseating doses of pow-

dered Peruvian bark, rhubarb, iron, calomel, etc., some of us, with a retching, resisting or puking personal experience, we are favorably impressed with the more pleasant and potent power of the little key. When we are shown (only as a relic, I trust) the dental, surgical and obstetrical instruments used a few decades back, we are at once convinced of the superior utility of the smaller instruments of the present day.

I believe in the platform, "The smallest possible quantity of the best obtainable means to produce a desired therapeutic result," to be safe and efficient. We get better results, more safely and pleasantly, with one-tenth-grain doses of calomel, repeated to effect, than did our fathers with heroic doses. We do neater and more efficient work with the small instruments than did our predecessors with what they used.

Another observation about my small key: It must fit the lock accurately. A key with very slight variations, in shape or size, will not answer. So it is with our therapeutic means; they must meet the indications. Ipecac will stop vomiting when indicated by persistent irritation of the mucous membranes, pale, relaxed, and white coated. Otherwise it will fail—is the wrong key. If the tongue is flabby, broad and indented by the teeth, small doses of nux vomica will be the key to throw this bolt, and securely close the door of egress. And so through the entire list of pathological conditions; we must study closely each symptom, to be enabled to select the indicated remedy.

Next in importance to results, in the demand of the age, is the pleasant and agreeable manner of obtaining results. I have seen (and *experienced*) cases where the patient was prostrated in bed for several days as a result of vigorous medication, that, with proper treatment, need not have been in bed a single day.

The physician should be preëminently a close observer. He should enter the sick room, or approach a patient, with all of his five senses alert, and each one bristling with interrogation points. Otherwise, he may not be able to select the proper little key, so greatly needed at that time.

[Written for the MEDICAL BRIEF.]

Lithium Benzoate.

BY J. A. BURNETT, M. D.,
Auburn, Ark.

While lithium benzoate does not have a very wide range of action, it is a remedy that fills some places with very good success. In my opinion, the most valuable effect of it is in what is commonly called "burning urine," that is, there is a burning sensation while urinating, with no specific affection. I have treated many cases of "burning urine," and was never successful until I learned to use this remedy.

In all cases of "burning urine" I test the urine, and if it is hyperacid I use lithium benzoate, five grains, three times a day. If I find it alkaline I use ammonium benzoate, same way. In most all cases it will be found hyperacid. Such a large per cent is hyperacid that I often prescribe the remedy without testing the urine.

I cured a man, about fifty years old, of "burning urine," with lithium benzoate, that had tried every doctor in his reach without being benefited in the least. I cured a married lady, aged eighteen, of the same complaint, that had been in such condition ever since she could remember. Upon examination I found her urethra irritated. The trouble was so bad that she could scarcely walk or stand at times.

I relieved a four-year-old girl that had been bothered with "burning urine" nearly all her life. At times was so bad that she could hardly stand it. I found the urethra irritated in this case, which proves that the remedy influences the urethra.

These cases all had hyperacid urine.

Most all of my cases of "burning urine" have been women and girl children, which is worthy of mention.

Lithium benzoate is useful in rheumatism, and is considered an intestinal antiseptic. It is beneficial in acute laryngitis when there is hoarseness. It is an expectorant, and can be used in some cases of chronic bronchitis. The dose

ranges from one to thirty grains. The average dose given by the new United States Pharmacopeia is fifteen grains, but this is too much. I consider five grains an average dose.

[Written for the MEDICAL BRIEF.]

The Prognosis and Treatment of Burns.

BY MILTON P. CREEL, M. D.,

Surgeon L. & N. Railway: Member American Medical Association; Ex-Vice President Kentucky State Medical Association; Referee for Muhlenberg County for the Kentucky State Board of Health; Secretary Muhlenberg County Board of Health; Member United States Board Pension Examiners; Surgeon I. C. R. R., Etc.
Central City, Ky.

There is, I am persuaded, much misapprehension in the minds of a great many physicians and surgeons regarding the prognosis of burns. This is due to the fact that the text-books on surgery are defective on this point. These works, as a rule, are full and accurate on all other facts pertaining to burns, but in many great surgical treatises no mention is made of the prognosis. This, to my mind, is a serious omission, and to it I can attribute some lamentable errors of prognosis.

It is a fact never to be lost sight of that the danger that comes to a patient from a burn is not in direct proportion to its depth, or to the tissue-destruction. It is the amount of surface injured rather than any other point, unless, of course, some vital organ is irreparably affected by the heat, that renders burns dangerous. By this is meant that a slight burn affecting a large area of the body is more dangerous than a severe one which destroys a small part of the economy. A burn which is so slight that it would produce but little inconvenience, if only a small area was affected, will prove mortal if a considerable portion of the body is so attacked. A patient may suffer a burn that will destroy a good portion of his arm, and recover—yet, if lightly burned on the chest or abdomen, he will be hopeless, if the area is large. The extent of burned area is a vital point in the prognosis of burns. It has been reduced to very accurate principles by correct observers. It is said, and this is borne out by the most accurate European and American observers, that if one-seventh of the surface of the body is burned, the prognosis is grave—if more than this is affected, the result is uniformly fatal. This is a rule of prognosis that is held in England and on the continent of Europe, and in my experience in twenty-five years' practice I have never known one exception to it. I have always, in my consultations and my private practice, found this an invariable rule of prognosis. It is, I believe, the wise course to advise the friends or parents of the gravity of what seems very slight burns. In other words, we must instruct them that danger lurks in the extent of the surface burned. This will save many physicians from the deep mortification that must come to one who misleads his patient or his friends by giving voice to a false prognosis.

In the treatment of burns, one of the first demands is to relieve the shock. Shock is responsible for many deaths in burns. In fact, many patients succumb to the shock. When the patient is seen in the article of shock, or is threatened with it, he should be put in a bath of 105° F., and an injection in the subcutaneous tissue should be made of normal salt solution. He should have an hypodermic injection of strychnine, and hot brandy and milk and water should be administered per os if the patient is able to take them. We should keep the patient well covered, and see that none of his strength is wasted in supporting his body, or in any other way. The application to the burned surface of that old familiar dressing-lint soaked in a mixture composed of equal parts of linseed oil and lime water, has done good surface to many physicians in all the years that it has been known, but that we have a better way of answering the demands in a case of this kind there is, to my mind, no doubt. This old-style dressing is most disgusting in its odor; in fact, it is highly repulsive. Again, oily dressings absorb nothing, and they mix with none of the discharges of the burned surface, and, therefore, are open to objections. They may, I think, greatly aid in the septic infection, in the manner outlined, and this is to be as much avoided

as possible, because I think that the self-infection is one of the principal sources of danger, and to it we can logically look for an explanation of the large percentage of mortality.

The dressing which I now rely upon consists in the application of absorbent lint which has been soaked in a saturated solution of boric acid. I apply this wet, being sure, however, never to apply the dressing which is cold. I use a tepid solution of boric acid. Just here let me say that before applying this dressing I open the blisters, drain off the liquid and sprinkle some boric acid on the exposed surface. The lint is put entirely over the burned surface, and over this is put covering made of wider cloths that can be easily removed. I do not approve of the removal of the dressing so long as the patient is comfortable and the temperature normal. If there is considerable discharge from the burned area the lint can be covered with boric acid from time to time. This exerts a proper influence on the burn. The outer cloth advised can be removed without trouble, and this will aid in removing much odor and discharge.

When a burn affects the hand or foot it will often require much ingenuity to prevent deformity. Very often it is a good idea to keep the hand in a splint, and to watch it very carefully in order to avoid deformities that very often ensue.

In the treatment of burns I have often called the attention of physicians I saw in consultations to the fact that anemia was slowly developing. This is the outcome of lack of feeding. These patients are to be fed adequately and systematically. If given his own way one of these patients—one with a considerable burn—will consume an amount of food altogether inadequate to the needs of the system. If this is necessary, I resort to forced feeding. It is a good idea to give concentrated foods, and to get our patient to eat whether he feels so disposed or not. I am morally sure the outlet of death from burns would be less if nutrition was maintained better than it is often done. I find it highly important to begin to look after this from my first visit.

[Written for the MEDICAL BRIEF.]

Venesection as a Remedy for the Premonitory Symptoms of Puerperal Convulsions.

BY H. J. PARKER, M. D.,
Clayton, Ill.

According to the old authors, Churchill, Mendenhall, etc., venesection is the only reliable remedy for puerperal convulsions, and should be resorted to as a preventive measure on the appearance of the premonitory symptoms of headache, buzzing in the ears, and giddiness.

At the present time and in the person of my present wife, I have the first case where I have resorted to the remedy as a preventive. The patient is a primipara, aged thirty-six, and, being a large, fleshy blonde, when she became enceinte, I said to her, "You are a good subject for puerperal convulsions," yet I told her none of the symptoms, preferring that she mention them as they might arise.

At the sixth month urine became scanty and albuminous, feet swollen. Laxatives, diuretics, spare diet.

At six and one-half months, headaches.

At seven months, ringing and fullness of ears.

I now began to grow uneasy, and to watch for developments.

At seven and one-half months, she felt very dizzy-headed on attempting to rise one morning. She lay down a little while, and on attempting to rise again the symptom returned.

I now took a quart of blood from her arm. The giddiness disappeared at once, and though it returned slightly a few times during the day, it, together with the headaches and buzzing in the ears, gradually vanished.

The patient went on to within one week of full term, and was delivered of a living child. Mother and child doing well. Had the symptoms returned I would have bled again. The treatment is according to the old authors. Modern authors advocate abortion and various medicines for puerperal convulsions. I have seen all plans fail save venesection, and that has never failed me.

Book Notices.

GRUNDZÜGE DER PSYCHIATRIE (Fundamental Features of Psychiatry.)—By Franz C. R. Eschle, M. D., Director of the Pflegeanstalt of the Heidelberg District at Sinsheim a/E. Berlin and Vienna. VII. 297 pp. Large 8vo.

This book has been written with scientific thoroughness, and at the same elementary clearness for the use of physicians and jurists, psychologists and pedagogues. In the preface the author emphasizes the fact that his presentation of the subject is from a more general point of view than that of one-sided specialists, that he continually points to the coherence of all branches of medicine, at the same time taking into account both the efforts at unification in medicine and the stupendous changes that have taken place during the last decade in the field treated of, and establishing the connection between antiquated and modern psychiatry. Eschle's work starts chiefly from the practical point of view, prognosis and therapy occupying a relatively large space. The clinical part is preceded by a section on nature and development of insanity, which treats of general conditions, and, in three chapters of elementary psychic derangements, which are classified as distinctive, effective and (originary) appetitive insufficiencies. The second section comprises the pathological pictures of insanity. The third section, which is of especially practical value, deals with the forensic importance of dubious states of the mind. The oftener one is in a position to pass judgment on the anomalies of psychic life, not only from a clinical, but also forensic point of view, the more readily will he recognize the peculiar difficulties of this task, and the more thankful will he be for the councils here tendered under the guiding influence of a jurisconsult, and constructed on a foundation of vast experience, at the same time taking the literature into critical consideration. As regards the relations of syphilis to nervous derangements, Eschle adopts Rosenbach's position, whereas otherwise nomenclature and conception correspond with Krepelin's axioms.

The work is built up on broad viewpoints, and is written throughout with essential preciseness, always giving reliable information to both physician and jurist. An English translation would, no doubt, be highly appreciated.

THE OPERATION, CARE AND REPAIR OF AUTOMOBILES. Edited from the files of the *Horseless Age*, by Albert L. Clough. New York: The Horseless Age, Publishers. Price, $1.10.

The owner of an automobile should be posted in regard to its mechanism and care and repair, even though he has an experienced man to run it; he should understand the construction and mode of action of the various parts, and have a working knowledge of the cardinal principles of electricity and magnetism, and be able to stand at the helm and govern. It will not only be satisfactory for the owner to know the elementary principles, but to go deeper into the construction and vital principles of the machine, so as to be able to make minor repairs, and thus save much in repair of maintenance. So many physicians are now owners of machines that this work will appeal to them. The automobile is yet an intricate machine, and should be treated accordingly; therefore, any work that gives definite information should be secured by all who have or desire an automobile.

DIAGNOSTICS OF THE DISEASES OF CHILDREN. By Le Grand Kerr, M. D., Professor of the Diseases of Children in the Brooklyn Post-Graduate Medical School. Pediatrist to the Swedish Hospital in Brooklyn, Attending Pediatrist to the Williamsburg Hospital, Brooklyn. Fully illustrated. Philadelphia and London: W. B. Saunders Company. Price, cloth, $5.00; half morocco, $6.50.

Diagnosis in diseases of children is a pretty intricate problem. There are so many difficulties, owing, at times, to the fact that the child is too young to locate even the trouble, and then the statements of an anxious mother or nurse are misleading. It is the correct thing to read all one can gain in relation to child life, and a thorough knowledge of previous condition of father and mother to thoroughly give the child a "square deal" in its troubles. Symptoms, at times, are the only guide, and even this is a guess. This work is full of ideas, and should be read by every family physician.

AMERICAN PRACTICE OF SURGERY. A Complete System of the Science and Art of Surgery, by Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M. D., LL. D., and Albert H. Buck, M. D., of New York City. Complete in eight volumes. Profusely illustrated. Volume III. New York: William Wood & Co. Price, per volume, extra muslin, $7.00; brown leather, $8.00; morocco, $9.00.

As we have stated in a previous review, this work is purely American, and no nation can produce the equal of an American surgeon in daring and successful results. Our most successful operators had their beginning in the crossroads of this great and progressive country. The contributors of this volume bear the names of the men who have made surgery a science. It contains such names as Duncan Eve, John Shelton Horsley, Charles Field Mason, John Chadwick Oliver, Charles Fairbank Painter, Roswell Park, George A. Peters, Alexander Primrose, George Gibier Rambaud, Channing Chamberlain Simmons and T. Turner Thomas. Such names as above noted gives a prestige that can not be surpassed by any volume on surgical subjects. This work is purely American, and as such, should have the prestige among American surgeons. The rapid sale accorded it shows the appreciation in which it is held, not only in America but among our foreign friends who appreciate good work.

DISEASES OF THE RECTUM. Their consequences and Non-Surgical Treatment. By W. C. Brinkerhoff, M. D. Chicago: Orban Publishing Co. Price, $2.00.

Often diseases peculiar to the rectum are but casually diagnosed and treated, while a thorough examination should be made, and the case treated in a scientific manner, for if this is not done properly the whole system is deranged, and complications arise. In making operations for rectal troubles great care should be taken lest you injure some muscles that may weaken the parts almost irreparably. Where surgery is not absolutely necessary the injection method, as used by the author, is all that is necessary. "There probably is no organ of the human body wherein normal conditions are so essential to local comfort and good general health; no organ that, when diseased, gives rise to symptoms so acute, so pronounced and so severe; no organ that produces more serious, more remote and more misleading reflex symptoms, and, at the same time, no organ that can be so seriously and dangerously diseased, without arousing suspicions of the patient or physician, as the rectum." It will prove interesting to practitioner and student to read this work.

MANUAL OF DISEASES OF THE EYE. For Students and General Practitioners. By Chares H. May, M. D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1890-1903; Ophthalmic Surgeon to the City Hospitals, Randall's Island, New York; Consulting Ophthalmologist to the French Hospital, to the Governeur Hospital, and to the Red Cross Hospital, New York; Adjunct Ophthalmic Surgeon to Mt. Sinai Hospital, New York, etc. Fifth edition, revised. With three hundred and sixty-two original illustrations, including twenty-two plates, with sixty-two colored figures. New York: William Wood & Co. Price, $2.00.

The general practitioner, as well as the student, will find in this work a concise, practical and systematic treatise that will give the foundation for diagnosis and treatment, especially of the minor ailments, before it is found necessary to place in charge of the specialist. This is such a delicate member that great care should be taken in treating it, therefore the practitioner should be thoroughly posted.

SURGICAL DISEASES OF THE CHEST. By Carl Beck, M. D., Professor of Surgery in the New York Post-Graduate School and Hospital, etc. With sixteen colored and one hundred and sixty-two other illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $5.00.

This is a very important field in surgery, and the literature on this subject is meager, therefore this work, by the eminent gentleman—Dr. Carl Beck—comes to us fraught with much usefulness, especially as great stress has been laid on diagnostic points, and the elegant illustrations are so suggestive of an intelligent reading, and useful application. Not only surgeons but practitioners should be interested in such a work, as they all know the value of a thorough diagnosis before the actual surgical operation is found necessary.

THE MEDICAL BRIEF

A Monthly Journal of Scientific Medicine

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Editorial.

Vale!

The Editor, Publisher and Proprietor of THE MEDICAL BRIEF has reached the time when he is compelled, by advancing age and certain physical disabilities following in its train, to bid adieu to the thousands of friends—subscribers and advertisers alike—whose support and encouragement he has enjoyed, and he hopes, deserved, throughout the thirty-five years the BRIEF has been published.

The writer is in his seventy-second year. He has been an active worker throughout his life; and since his early manhood almost his entire energies have been monopolized by the responsibilities which the editing and publishing of the BRIEF have imposed.

He was born with an independent mind. He has always had opinions of his own, and his nature is such that for these opinions he can not help from fighting, at whatever expenditure of money or physical effort. But the time has come when he feels that he would like to rest—to get away from all turmoil and strife, and for the remainder of his years to pursue the even tenor of his way "along the cool, sequestered vale of life." Consequently he has sold the BRIEF, and has retired from all business of every kind. He believes he has earned the rest he now covets and proposes to take, and that his thousands of friends among the physicians of the country will not begrudge it to him.

The BRIEF has always been his *Benjamin*—his best beloved! Into its pages he has put his best thought and intellectual effort. Its editorials, particularly, have been the very coinages of his brain. He has loved this journal with all the affection a devoted parent can bestow upon a favorite child. And he parts from it now with a feeling of sadness which is only assuaged by the knowledge that it is all for the best. The comforting thought, too, comes to him that it will not die. Mr. Henry R. Strong, to whom he has sold it, he has known for many years.

He is an able and honorable gentleman, and has abundant capital. He is, besides, a very successful publisher in another line, and the writer, therefore, believes that the future of the BRIEF is safe in his hands. And he asks for him the same hearty support and encouragement that he himself has so long enjoyed. And if he did not believe he would deserve it, he would never have sold it to him.

Over the future destiny of the BRIEF its founder and present editor will have no control. Nor can he be held responsible for any policy it may hereafter pursue. But he has no fear that it will deteriorate in standing, quality or influence. He hopes, rather, that the younger and more active hands into which it falls will improve on his efforts, and make the BRIEF better and more influential than it ever was.

And now, once more, he begs to make his grateful acknowledgments to the friends and subscribers who have been with him all these many years. For each and every one of them he wishes the blessings of health, long life and prosperity. May all the good things of this world be theirs; and, finally, when the end shall come, as come it must to all of us, may the Great Author of our being take them into His kind and gentle care.

And now, dear friends, I bid you good bye. J. J. LAWRENCE.

And Now for the Future!

Beginning with the January issue, THE MEDICAL BRIEF passes into new hands.

It is not without some feelings of diffidence that the new owner assumes responsibility for its future destiny.

The journal has had so long and so eventful a career, and the personality of its distinguished founder and editor has shone out so conspicuously in its pages, that his retirement can not fail to be noticed and to occasion regret among the thousands of physicians who have read after him these many years.

And yet, the future proprietor hopes, by a considerable broadening of its scope, by the introduction of new features already in contemplation but not fully matured, and by the aid of the best contributors in America and Europe, ultimately to so improve the paper in every way that it shall be of more real and substantial use to its subscribers than it has even been in the past.

The constant purpose shall be to make the BRIEF strictly a medical paper, and while the highest degree of scientific merit will be aimed at, this shall always have a practical setting. And in this endeavor to make the paper the best of its kind published, no amount of capital or effort will be spared.

The new proprietor hopes, also, that, wide as its circle of readers has always been, it will be extended in the future, and that, with the broadening of its field, the BRIEF shall be an influence for good, and shall be an ever-present help to the busy practitioner, for whom it is intended. And he asks the indulgence of all old patrons until such a time as his promises can be tested by accomplished results. HENRY R. STRONG.

Natural Religion.

Mankind is very slow to learn what is nevertheless an inexorable truth, that not one of God's laws can be violated without provoking the natural penalty attached to such violation. No physical, intellectual, moral, spiritual, or other law can be violated with impunity. The penalty is as inevitable as the rising and the setting of the sun. We do not always see the sun rise and set, nor are we always able to trace our sufferings to the broken law. It is there just the same, for they are inseparable.

It makes no difference whether an offender sins in ignorance or wilfully. Nature takes no cognizance of intention. Her laws operate inflexibly without regard to the circumstances. The man who takes a lethal dose of strychnine, whether he does so knowingly or by mistake, dies.

Unfortunately, the Church has always taught that forgiveness removes the penalty of wrong-doing. In this way she has been a stumbling-block in the path of men by preventing them from learning their lesson as easily and quickly as they otherwise would. In the very nature of things it is impossible that forgiveness should take away the penalty of broken law. Yet people are anxious to believe it; and the Church encourages them in

doing so. Hence we continue to grope and stumble instead of laying hold of and being governed by the knowledge of the workings of natural law.

Every sane man knows intuitively what is right and wrong; if he does not he has one great precept to which he can refer his course for guidance. "Do unto others as ye would have them do unto you." If he holds steadfastly to this and looks facts courageously in the face, he can not go far wrong. Anyhow, he will have to accept the result of his deeds, whatever their nature. The sooner mankind learns that there can be no juggling, no shirking, but that we must pay the price in every single instance, the sooner we will begin to reap the harvests of our knowledge.

It is true we sometimes reap what we don't sow, but we always reap what we do. The man who does that which injures his self-respect becomes more callous to just that extent. The delicate, inner promptings are less true in their workings. The fine mechanism of the conscience becomes disordered. Then the man is like a ship whose rudder has been injured.

Natural religion is so simple that few are able to accept it. The majority of people do as they wish and shut their eyes to the consequences. Some scapegoat can be found. This knowledge is of more importance to doctors than to any other class of people, since to them is entrusted the life, health and happiness of their patients. The few principles involved in natural religion will sometimes do more to restore the sick to health and usefulness than drugs, for, important as they are, the relief they afford is but a detail.

The Church, like many other institutions, has been led astray by the temptation to establish man's dependence on her. She has been unwilling to see him self-reliant, lest he cut the apron-strings. When a man knows positively that his course in life is hedged all about by invisible natural laws, the breaking of which must be followed by suffering and scars, then will he elect to follow the right cheerfully, joyously. The great work of Christ for civilization will be nearing its accomplishment. The truth will set us free.

Inefficiency.

Nearly every day we read in the newspapers of some horrible railroad accident. These accidents occur with such frequency people are getting afraid to travel. Every one is asking why there are so many accidents. The reason may be summed up in one word, inefficiency. Railroad employes do not attend to their business properly.

The popular idea nowadays seems to be for each man to do as little work as he can and still hold his job. These dreadful accidents would not happen if railroad employes would concentrate their minds on their duties. The popular idea of doing as little as possible for the money one receives is all wrong. The correct idea is to earn all one is paid and more, and directly he will be getting more.

Careful attention to one's individual duties would prevent the thousand and one accidents which almost daily shock us. Each man is benefited by the other man's doing his duty properly. Seldom does an accident occur which does not reveal stupidity or carelessness at the bottom. The ease with which these horrors could have been averted in most cases incenses people.

Much of this state of affairs has been brought about by the yellow newspapers. Whenever a man, by hard thought and close attention to business, becomes prosperous, they begin harping about his money, without stopping to think that he is precisely the man who employs others. The man who is industrious, economical and accumulates money is the one who starts enterprises and provides opportunities for other people. Work and wages are necessities of our civilization, and the man who makes them possible is entitled to our respect and regard.

This preaching of discontent is the principal cause of so much inefficiency. It is a bad thing for the individual and a bad thing for the people. The individual loses sight of the fact that merit is the basis of promotion, and the public suffers through his half-hearted work. The great secret of life, after all, is paying for what you get. The man who gives better service than he is paid for is never in debt to any one and is preparing for a better job.

The motto of the world should be: Do your duty and get others to do the same. Mutual benefit is the result, and the individual can feel assured that he is building better than he knows. He can well afford to trust the future for the outcome if he lives up to the principles involved in a successful career.

Those who criticize and abuse successful people in order to create prejudice do not advance their own selfish interests in any way and do not greatly injure the successful person, but they do do a great deal of harm to society at large in arousing evil passions and inculcating false ideas.

The Jap.

You have, of course, noticed that California is opposed to unrestricted immigration from Japan. We already know that she is opposed to Chinese immigration, and when we come to know as much about the Jap as about the Chinese, we will be obliged to feel that the yellow peril is not a bugaboo, but a real menace.

California can not afford to ignore the problem of the Jap. We already know that the Jap, like the Chinese, quickly learns to do the white man's work, and will take a job at much less than the white man can live on. The Jap in his own country is selfish and intolerant of the white man, except as a buyer of curios. Industrially, the white man is never welcome.

The prevailing idea that the Jap is a charming little fellow is based on superficial observation. That he is clever, all acknowledge; but that he is correspondingly lacking in moral sense, a number of instances of their dealings, of which the following is a typical example, clearly prove.

Several years ago a Japanese, with several assistants, went to St. Petersburg and opened a tea house which, cleverly managed, prospered greatly, and the proprietor and his assistants made friends among the patrons. At length, the Japs expressed a desire to become naturalized Russians, members of the orthodox Church, and to marry and settle down in the country of their adoption. The Russians were flattered by this preference for their country and institutions. Accordingly they aided and abetted the Japs until all their wishes were accomplished. All went well until the breaking out of war, when suddenly the Japs were missing, having abandoned home and families. It transpired that these men were officers in the Japanese army, who took with them to headquarters all the information and confidence gathered during those years spent in the heart of the enemy.

Treachery such as this is very revolting to the Anglo-Saxon. No cleverness, no success, can redeem it. A race which is at once thoroughly unscrupulous and clever is bound to obtain a certain amount of success and recognition, but the Anglo-Saxon can never dwell in peace, side by side, with a people who are both ambitious and lacking in moral sense.

People living on the Pacific Coast, who have had practical dealings with the Japs, assert that they are given to trickery, that they are dishonest, untruthful, and generally unreliable, under a fair seeming of tact and politeness. The Chinese, on the other hand, while not so pleasing in manner, are honest, truthful and generally dependable.

A conservative estimate of the number of Japanese in the United States today places the number at one hundred thousand, and immigration is constantly increasing. As the Jap does not assimilate, and can work cheaper than the white man, this increasing stream of immigration constitutes a real Pacific Coast problem.

Before taking sides with the Japs or condemning our friends on the Pacific coast for the stand they have taken in this matter, we ought to know more about it. At least, we ought not to jump to conclusions based on long-range observations or sentimental considerations.

Better to Be a Man Than a Peg.

In this day of organizations, combines and trusts, the rights of the individual are lost sight of. The average man who joins an organization is simply a peg, to be moved around to suit the notions of a few.

There are men in organizations who are not pegs, simply because they do not

submit to organization rule, but continue to hold their own course, regardless of what others may say or think. Many men can not do this, however, and are hopelessly submerged, their liberty lost, their rights infringed, until they are mere pegs, to be moved here and there, at the dictation of a few ruling spirits.

Such a man, if left to himself, thrown upon his own resources, compelled to grapple with circumstances, to think, plan, execute independently, develops and strengthens his character, and becomes a capable man, a power for good, and does all within his limitations that a man can accomplish.

The same man, in the grip of organization control, becomes narrower, feebler, until he is nothing but an automaton—stunted, wretched, and useful only to be moved about in another's game.

The organization might be a good thing, if it carried out the designs for which it was formed, but it invariably degenerates into a machine, controlled by the few, and used to suit their purposes. A few do the thinking and the majority submit to their dictation, without realizing that they are wronging themselves and the cause of progress.

The natural love of independent research and discovery suffers when a man is hedged all around by restrictions and prohibitions—that is, it would, if he were to submit to such treatment. Fortunately, the American doctor does not take kindly to leading strings.

The American doctor is going to do what suits *him*.

The MEDICAL BRIEF believes that the individual doctor is able to make his own way without being incessantly told what to do. All this guiding and protecting is gratuitous. It is the outgrowth of abnormal egotism. Give the doctor food for thought, present the other side of all questions for his consideration, stimulate him to do and dare, to struggle and thirst after knowledge, give him the fullest liberty and opportunity, then let him alone and he will arrive all right.

If the average doctor could appreciate his true worth, if he realized what self-reliance and liberty have done and are doing for him, if he could get an outside view of the courage, the strength, the self-confidence, the resourcefulness, the perseverance in the face of difficulties, the many fine qualities that have been bred in him by independence, the proposition to subordinate his individuality—to reduce him to the level of a peg in a machine, would awaken a revolt commensurate with the danger which threatens him.

No man can ever amount to anything who is pulled this way and that to serve somebody else's ends.

Too Much Law.

In the early days of the Republic, men sought to have as few laws as possible beyond those needed to secure the individual in peaceful possession of the fruits of his labor and to settle disputes which the parties, themselves, were unable to settle. All questions relating to a man's health, his conscience, freedom of opinion, etc., were left to his own common-sense and discretion.

This policy made the United States what it is today. Men's energies were unhampered. The incentive to individual thought and action was strong. A man found his level sooner. Experience kept school and great things were accomplished.

Gradually a change has come about. Nowadays, the tendency is to make a law to remedy every evil that crops up, regardless of the fact that it is only by education that we make any real progress. Evils tend to correct themselves if left alone, but no law can legislate a fool into a wise man.

The doctor is in a position to extend a helping hand to mankind by educating them to have proper standards of judgment. But as an educated man, himself, he is consistently opposed to laws which, under the pretense of protecting people, really stifle those instincts and energies which would otherwise develop and broaden people, and consequently make for progress.

The decision in the Bishop case, of a year or two ago, that parents are not legally obliged to call in a physician to a sick child is probably correct. Of course, it seems hard that a child should die without medical attendance, yet the

parents might have called in a man who had a diploma, yet whose practice was equivalent to doing nothing. If people can be legally compelled to employ a doctor, it is easy to go a step further and declare that they must select a particular pathy. Laws which encroach upon individual liberty always work more harm than good. Better freedom with its mistakes and occasional tragedies than the iron compulsion of law which leaves no room for choice and teaches no lesson.

There is more danger in too much law than in too little. Laws passed to regulate people are easily turned into a source of blackmail. We should never forget that the best governed country is also the least governed. Fewer laws, of a fundamental character, and those enforced, is sound social policy. Let us not endanger the magnificent growth and prosperity of the United States by retrograding to the old monarchical idea of having the government do too much, instead of relying on our own powers. Let us safeguard our country while there is time by a vigorous opposition to all laws which hamper the individual under whatsoever specious plea they may be presented.

Intuition.

Doctor, did you ever stop to ask yourself what intuition is? Is there really such a thing? It has been denominated the sixth sense. It is a spiritual sense and can not be located. Its existence can only be proved by its findings. It can not be called "unconscious cerebration," since it seems to need no facts to go on, yet the results it arrives at are real.

For instance, dogs and babies always know their friends by intuition. A dog can divine a man's moods and has his own way of showing sympathetic comprehension of joy and sadness. If two men go out for a walk and are joined by a dog, the dog will instantly choose one of the men to follow, and it will always be the one who likes dogs.

No doctor should choose diseases of children as his specialty unless he really loves children. Love is a close observer and a fine manager. If the baby stretches out its arms to be taken when the doctor enters the room, then you can be sure he will do well in that line of practice. Sympathy is absolutely necessary to a good understanding of a patient's condition, more than ever so in the case of children when the doctor must make his diagnosis unaided by any subjective information.

Don't flatter yourself that you can deceive a baby by any amount of art. If you are not really interested in children, the baby will know it instantly. The averted face and wail of protest will brand you as a fraud instantly.

By the way, love of one's work is the secret of success in most callings. If you love your work, you are sure to be steadfast, persistent, progressive, and these are the conditions which lead to success.

All our knowledge of religion is based on intuition. Religion is a series of convictions based on the experience of life. How we get them we do not know. We sense them spiritually, and intuition is the word we use to denote the process; but while we can not explain, we feel just as sure as if we were talking demonstrated certainties instead of faith.

People used to think religion was a matter of profession. Terrible cruelties were committed in the name of religion because of this misunderstanding. As humanity has deepened and broadened and mellowed under the workings of the leaven of Christ, our conception of religion has steadily risen. We now know that while all religion is fundamentally the same, every man has his own individual brand, differing only in minor particulars.

We know, too, that no sect has any proof to offer us of man's future estate. There is no such thing as revealed religion, except what can be gotten from analogy and the observance of Nature's laws. Our knowledge of religion is purely intuitive. All races and all ages have had it. It has been perverted and obscured at times, but it is and always has been an innate part of man. Right living makes it shine out ever clearer.

Whatever material science may have to say about it, there is such a thing as intuition, and in its apprehension of facts it is quicker and more correct than reason.

THE MEDICAL BRIEF

J. J. LAWRENCE, A. M., M. D.,
EDITOR AND PROPRIETOR,
NINTH AND OLIVE STREETS,
ST. LOUIS, MO.
NEW YORK OFFICE, ASTOR COURT BLDG.
FOREIGN OFFICE:
AUCKLAND HOUSE, BASINGHALL AVE., LONDON, E.C., ENG.

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[Written for the MEDICAL BRIEF.]

Adrenal Tumor of Vagina Secondary to Malignant Hypernephroma of the Kidney.

BY ALBAN DORAN, F. R., C. S.,
Surgeon to the Samaritan Free Hospital; Past President of the Obstetrical Society of London.
London, England.

Dwelling as much as possible on matters of clinical interest, and avoiding deep pathological subtleties, I will relate a remarkable case in my own practice where a malignant tumor developed in the vagina of a middle-aged woman, subject to enlarged kidney. I removed the kidney, and it was afterwards found that the renal growth was a hypernephroma, a malignant tumor originating in adrenal tissue in that organ, while the vaginal growth was not a coincident primary sarcoma, but a secondary adrenal tumor. A very similar case, as I will explain, was under observation in London at the same time as my own.

My patient was a very sallow-complexioned married woman, aged forty, who called in her doctor on account of an attack of shivering, sweating and fever, early last autumn. A tumor was detected in the vagina, a racemose body attached by a well-defined pedicle to the lower part of the anterior vaginal wall. There were also three sessile growths in the posterior wall, one being jugulated. A small, movable tumor occupied the right iliac fossa. The lobules of the pedunculated growth were shed from time to time, and I sent them to Mr. Shattock, of the Royal College of Surgeons, and to my colleague, Dr. Cathbert Lockyer for examination. In November, 1906, I removed the abdominal tumor. It was a typical malignant adrenal growth in the lower part of the right kidney, which had become twisted in its pedicle so that the tumor lay uppermost, touching the liver, whilst the upper pole of the kidney lay downwards, rotated on the lower part of the lumbar spine. As there was considerable shock, I postponed the removal of the original growths. The patient survived the nephrectomy three months, after declining to allow a second operation for the removal of the polypus and the sessile tumors in the vagina. Until her death, lobules continued to come away from the vagina, and symptoms of pulmonory complication were observed. At the *post-mortem* secondary deposits were found in the liver, lungs and intestines. Under the microscope it was found that the vaginal polypus and the omental and visceral deposits were histologically identical with the renal tumor, a malignant adrenal growth, which was declared by the pathologists above mentioned to be an adrenal carcinoma, and not sarcomatous.

Just before I brought forward my case at a meeting of the Obstetrical Society of London, I mentioned it to Dr. Beckett-Avery, who, to my surprise, informed me that he had recently been in-

vestigating another, most striking for its similarity with my own, excepting that one clinical feature, sloughing and general septic infection, was absent. Beckett-Avery's patient was fifty-five years of age, alarmed on account of vaginal hemorrhage. A polypoid mass was found attached to the anterior vaginal wall. It was removed, and appeared, on microscopic examination, to be a very vascular sarcoma. A large tumor, occupying the right side of the abdomen, was detected when the patient was in the hospital. The vaginal growth recurred in its former site, and was removed within two months of the first operation. The patient died a month later. The tumor in the abdomen was a hypernephroma of the right kidney; the right suprarenal capsule was normal, but numerous secondary growths, some of large size, were found in the liver and lungs, and on comparing sections of these growths with sections from the vaginal tumors, there could be no doubt that they were all of the adrenal type, secondary to the renal growth.

Dr. Beckett-Avery read brief notes of the above case when my own was brought forward at the Obstetrical Society. In the discussion Dr. Cathbert-Lockyer related how he had watched for nearly ten years a woman subject to uterine fibroid; during the last six months a renal tumor had developed. He had operated on the patient, fifty-seven years of age, a few hours before the discussion was held, removing the diseased kidney, the uterus and also a parovarian cyst. Frozen sections showed the renal tumor to be a benign hypernephroma, an adenoma derived from adrenal "rests" in the kidney. Since this discussion Dr. Lockyer informs me the uterine tumor has been examined, and was found to be a fibro-myoma, including a sarcomatous patch quite free from any adrenal elements, benign or malignant. The third tumor with which this patient was afflicted, the parovarian cyst showed no evidence of malignancy of any type.

Adrenal Tumors—Much has been written during the past twenty years, both in Europe and America, about "hypernephroma" and "adrenal" tumors. The literature of the subject is now very voluminous and hard to study. We must be careful to avoid confusing these new growths with malignant tumors of the suprarenal capsule itself, usually associated with abnormal growths of hair, and sometimes with insanity (Knowsley Thornton). In "hypernephroma," tissue resembling that which makes up part of the suprarenal capsule takes on more or less malignant action. This tissue forms the so-called adrenal "rests" in the substance of the kidney. Hypernephroma has been found in patients of almost every age. Dr. William S. Cheesman, of Auburn, N. Y., reported in the "Annals of Surgery," for January, 1907, a case where he removed a hypernephroma weighing four and a quarter pounds from an infant twenty months of age. This disease of the kidney seems very malignant; secondary deposits in the lungs and liver developing early. The suprarenal capsules themselves do not appear to be involved.

In the cases which I have related there can be no doubt that the vaginal growths were secondary to the renal tumors, unless we accept a theory suggested to me by Mr. Bland-Sutton that the disease in my patient's case was a general "lighting up" of malignant change in "rests" already present in the vagina as well as in the kidney; he even expressed an opinion that the vaginal growth might have been congenital, and also the primary seat of that change. We will assume, however, that in the cases under consideration the vaginal tumor was secondary.

The existence of new growths of the same type higher up the genital tract, has been recognized for some time. Dr. Eastwood's important monograph on the occurrence in the pelvis of malignant tumors originating from adrenal remnants, published five years ago in the fifty-third volume of the "Transactions of the Pathological Society of London," remains the best summary of the subject. Excluding instances of adrenal tumors in the male genital tract, we may note Marchand's case of adenoma of an accessory adrenal in the forward ligament of a woman aged fifty. Eastwood himself furnishes medical literature with the original report of an adrenal tumor connected with the uterus. The patient was a sterile woman, aged forty-eight, who had married when

thirty-eight years of age, the menopause occurring at as early an age as forty. For fifteen months the patient had been troubled with sacral and hypogastric pains, associated with irregular, dark-brown, and sometimes offensive, vaginal discharge. A solid tumor, movable and dull on percussion, reached midway to the umbilicus. Hyperectomy was performed. At the operation the presenting part of the tumor was found to be cystic, and two pints of yellowish fluid had to be drained off before the solid part of the new growth could be delivered through the abdominal wound. The tumor appeared to spring from the uterus, which was amputated through the top of the cervix, where the tissues appeared perfectly healthy. Both ovaries were removed at the same time, and found to be natural. No other abnormalities were detected. When examined one year later there was no evidence of recurrence, and no other sign of disease. Such was the original report, and it seems clear that neither kidney was the seat of a new growth. Dr. Eastwood has recently informed me that the patient, shortly after the above-noted examination, began to ail again, and clear evidence of general dissemination was detected. At the time of her death she was not under Dr. Eastwood's observation, and it appears that, unfortunately, there was no *post-mortem* examination.

Two cases of alleged adrenal tumor of the ovaries are included in Dr. Eastwood's monograph. The first was recorded by Neham. A suprarenal "rest" developed in the neighborhood of a cystic ovary, and invaded the cyst wall. The second, originally described by Weiss, occurred in a girl aged seventeen. A tumor developed in a suprarenal "rest," situated between the layers of the broad ligament. It first invaded the hilum of the ovary, and ultimately came to lie upon the fundus uteri. The enlarged and partially infiltrated ovary formed an excrescence on its upper aspect. Such was Weiss' interpretation of the pathology of his case, but he himself admits that the histological characters of the tumor differed much from those of a pure adrenal "rest." Eastwood, therefore, "can not think that Weiss has successfully excluded the possibility of his case being really an angiosarcoma commencing about the hilum of the ovary, and subsequently invading the broad ligament."

In dismissing the subject of adrenal tumors in the upper part of the female genital tract, let us bear in mind this uncertainty about angiosarcoma and adrenal tumor. The tissues of the latter type of new growth are often extremely vascular. Such was the case both in my own specimen and in Dr. Beckett-Avery's, where the vagina was the seat of the secondary growth, but I shall presently refer to Klien's case of vaginal sarcoma, which was described as an angio-endothelioma. If Weiss took a malignant angioma for an adrenal tumor, Klien may have made the reverse error. Perhaps both these writers were correct; yet, if so, it does not follow that others may have not fallen into an error of the kind above suggested. In other words, adrenal tumors of the vagina may have been misinterpreted and recorded under wrong titles.

Hitherto, however, whilst we see that adrenal tumors of the upper portion of the genital tract have been already reported, the two cases which I relate are the first in which that class of new growth has been recognized in the vagina.

Solid Vaginal Tumors—As in my case and Dr. Beckett-Avery's, the principal vaginal tumor was pedunculated. Theirs simulated a connective tissue tumor of the vagina which, whether innocent or malignant, is frequently attached to the vaginal mucous membrane by a more or less distinct stalk. Primary cancer of the vagina usually appears as a deep ulcer with a hard base, or before ulcerating it may spread superficially over the surface of the vagina, converting it into a rigid tube. Pedunculation seemed practically unknown in this class of new growth until Macnaughton Jones and Lockyer reported, at a meeting of the British Gynecological Society in March, 1907, an instance of primary carcinoma of the vagina, where the new growth was hotryoidal in character, and the deeper part was pedunculated." The patient was a widow, aged sixty-five. This case was exceptional, and therefore we may dismiss carcinoma altogether.

We are bound, on the other hand, to devote some attention to fibroma of the vagina on account of its clinical resemblance to primary sarcoma of the vagina in the adult, and to the secondary adrenal tumor, the subject of this communication. This type of new growth is practically inseparable from myoma.

The best monograph on fibro-myomatous tumors of the vagina is that prepared by Dr. Richard R. Smith, of Grand Rapids, Mich., and published in the forty-fifth volume of the *American Journal of Obstetrics*. He collected one hundred and one cases. In only two was the new growth multiple, a feature of importance, for in sarcoma, as in my adrenal tumor, multiplicity is rare. In twenty-seven cases the tumor was designated as sessile, and in thirty-nine as pedunculated, and although there remain thirty-five cases where no statement is made as to this point, it remains clear that pedunculation is very common.

We must bear in mind Dr. R. H. Smith's important statement that his statistics prove how there is a marked tendency in fibro-myoma of the vagina to undergo necrosis. The same change, as has long been known, is frequent in primary sarcoma of the vagina, and in my own case it gave rise to constitutional symptoms which led to the detection of a tumor. Dr. R. H. Smith's evidence shows that sloughing is not in itself a proof of malignancy.

There remains the type of primary tumors of the vagina which the adrenal new growth in my own case most resembled. That type is specifically known as "primary sarcoma of the vagina in the adult," so as to distinguish it from a yet more malignant type which appears in infancy and childhood. By "primary sarcoma," I understand the adult type. Many authors, such as Veit and Gow, have written on primary sarcoma. Perhaps the best monograph on the subject is that prepared by Jellett and Earl, of Dublin, and published in the fifth volume of the "*Journal of Obstetrics and Gynæcology of the British Empire.*" They tabulated thirty-nine cases where malignancy was undoubted, but the histology of many of these cases remains open to doubt. Thus, seventeen were reported as "spindle-celled," but the authors suspect that at least six out the seventeen were probably endotheliomata. Veit, himself the author of an earlier work on primary sarcoma, warns us therein not to be too hasty in defining the histology of malignant growths in the vagina, or in concluding that they are primary. Klien's case, of which I have already made some mention, is doubtful. Veit suspects that it was a carcinoma. Klien himself classifies it as a lymphangio-endothelioma cavernosum hæmorrhagicum. The new growth appeared as two friable, pedunculated, tuberous, elastic tumors. It was found, under the microscope, to be reticular in structure, with its meshes filled with blood. Now, when we turn to Neusser's treatise on diseases of the suprarenal capsules in Nothnagel's encyclopedia, we find that pathologists have noted how adrenal "rests" in the kidney and elsewhere tend to become malignant. One prominent feature of this degeneration is extreme vascularity, so that the tumor appears almost telangiectatic. Klien's patient suffered from recurrence, but, though watched for a time, she seems to have passed away from his observation, after refusing to return to the hospital. There is, moreover, no mention of any examination of the abdomen during the time that she was being watched. Hence I can not help suspecting that Klien's tumors might have been of adrenal origin, and if not, I must repeat that in other reported cases the adrenal nature of the "primary sarcoma" might have been overlooked, for adrenal tissue is unfamiliar to the gynecologist.

In comparing primary sarcoma with my case of vaginal tumor three other features deserve consideration, namely: Pedunculation, pigmentation and sloughing. Pedunculation is very frequent in primary sarcoma, but it represents a later stage of the sessile tumor, both stages being observed in my adrenal tumor where the growths, as is often the case in primary sarcoma, were multiple. Multiplicity almost proves malignancy, for, as we have seen, Richard H. Smith has shown that not two per cent of fibro-myomas of the vagina are otherwise than single.

Pigmentation is a most interesting feature in primary sarcoma of the vagina, and one of the sessile growths in my own case was pigmented. Boldt, of New York, reported a case before the New York Obstetrical Society last year. The patient was a multipara aged thirty-seven; the tumor, figured in the *American Journal of Obstetrics*, October, 1906, was made up of small, round cells, the deeper being laden with dark pigment. Horn and Moreston, on the Continent of Europe, have both reported instances of pigmentation, but both trace the pigment in the cells to the blood, so that the tumor was only "pseudo-melanotic." Such appeared to be the case in the sessile adrenal growth which I have described above.

Sloughing is very frequently observed in cases of primary sarcoma; indeed, it is probably constant in the later stages. Howard Kelly dwells on this complication which, as he observes, may be the direct cause of death. My experience shows that an adrenal tumor of the vagina tends to slough. When decomposition began in the case which I have related, rigors and fever set in, and not till then was the vaginal tumor discovered. Before death all the vaginal growths had undergone very extensive sloughing.

In two authentic cases of primary sarcoma of the vagina secondary deposits developed in the lungs. During convalescence from the nephrectomy, as I have above stated, symptoms of that complication developed in my own patient. Bearing in mind the two cases, I was therefore led to suspect that the primary seat of the pulmonary deposits was the vaginal growth, but the microscope showed that both were secondary to the renal tumor.

Conclusion—These cases teach us the great importance of careful microscopic research, especially in respect to prognosis, in all cases of connective tissue tumors of the vagina. The fact that a vaginal tumor is histologically of the adrenal type is, as we see from the above cases, highly unfavorable. Its association with a primary hypernephroma of the kidney is particularly grave, as secondary deposits in the viscera, often impossible to diagnose, are usually present at the same time. In my case the tersion and consequent invertion of the affected kidney was a feature of interest to the general surgeon. Nephrectomy for hypernephroma is fairly satisfactory as to ultimate results, provided that no secondary deposits are present. Unfortunately, that was not the case with my patient.

[Written for the MEDICAL BRIEF.]

An Investigation into the Modes of Action of the Group of Antiseptics.

BY C. D. F. PHILLIPS, M. D., LL. D. (EDIN.), LL. D. (ABERDEEN), F. R. C. S. (EDIN.), M. R. C. P. (LOND.).

Late Lecturer on Materia Medica at Westminster Hospital, London, and Examiner in the University of Aberdeen, Glasgow and Edinburgh.
London, England.

No. II.

In continuation of this subject I may point out that De la Croix, Miguel and others have followed the line of observation laid down by Koch, and, as they have experimented with the same chemicals, but with a different micro-organism (viz., the non-specific bacterium termo cultivated in meat infusion), a comparison of the results thus gained is interesting:

TABLE II.

	Koch.	De la Croix.	Miguel.
Sublimate Solution.	1:300,000	1:90,208	1:14,300
Oil of Mustard	1: 33,000	1: 3,353	.....
Iodine	.....	1: 5,020	1: 4,000
Salicylic Acid	1: 1,500	1: 1,008	1: 1,000
Boracic Acid	1: 900	1: ——	1: 130
Carbolic Acid	1: 800	1: 669	1: 313
Alcohol	1: 12.5	1: 21	1: 105

Klein, in an elaborate and exhaustive inquiry into the antiseptic properties of phenylproprionic and phenylacetic acid, has, in a yet more striking manner, shown that any generalization from results of the germicide action of one chemical agent on one form of micro-organism to its action upon another is not admissible.

For instance, he finds that a non-specific micrococcus and bacterium termo requires one to two hundred phenylpropionic acid to destroy its vitality, whereas bacillus anthracis requires a solution of one to eight hundred only, both being exposed for the same length of time, and under similar conditions; and, again, the virus of tubercular matter requires to be exposed to a solution of one to two hundred

for ninety-six hours before it loses its activity, whereas that of swine plague is destroyed by being exposed to one to eight hundred for twenty minutes.

Marteris, Weeks, Yerson, and others have compiled long series of tables as to the results gained by exposing various micro-organisms to the action of different antiseptics for variable lengths of time, but our ignorance of many of the fundamental laws which govern the growth and development of these germs, and their adaptability to altered conditions, must make us very cautious in accepting observations which differ so widely from each other, though performed apparently under similar conditions.

In such experiments the chief sources of possible inaccuracy appear to be due to:

1. The fact that some forms of micro-organisms appear to be more virulent than others, though both are of the same species. As an illustration of this may be quoted the fact, that if a healthy mouse be inoculated with the blood of a sheep suffering from anthrax, death results in the course of twenty-four to thirty-six hours, but the converse proposition does not hold good; to a healthy sheep, which is inoculated with the blood of a mouse affected by anthrax, the disease is not communicated from the mouse.

2. The *spores* of those organisms which produce them are much less vulnerable than the *bacilli;* and

3. The bacillus of cultivations is not so well calculated to resist the action of the antiseptic, though equally well able to reproduce the disease. For this reason, therefore, it is most desirable that the micro-organisms thus experimented with, if of a specific character, should be passed from time to time through an animal that is capable of inoculation by the disease, in order to increase and refresh their power and virulence.

Much valuable knowledge may be gained from perusing these results, which distinctly indicate the great service germicides are able to render when direct application is possible to those sites where the septic or zymogen processes are taking place; through their deterrent effect the process may be checked or entirely arrested, either by placing the organisms under such untoward circumstances as to render their further life impossible, or by poisoning the nourishing media, so as to kill the microbes completely.

But these are not the only factors to be taken into consideration, even in regard to the external application of antiseptics, and highly important is the following problem, viz.:

4. What is known regarding the action of germicides on the tissues of the body?

The local action of many of the antiseptics is that of an irritant, even of an escharotic, if used in a sufficiently concentrated form, and there seems but little doubt that a germicide may not only prevent the activity of the microbes present, but, by its stimulating nature, may also act upon the cells of the tissues, and thus produce a more healthy and vigorous condition, which renders them better able to disintegrate the enfeebled germs by which they are infested.

Many of the antiseptics already tabulated are so destructive in their action to living tissues (when sufficiently concentrated to show a germicide action) that they have to be abandoned for all practical purposes, and it does not, with our present knowledge, seem possible to recognize to which reageants the cells of the tissue or the micro-organisms themselves are the first to yield, although it is a most important point to appreciate.

Difficult as the subject is in relation to the *external* application of antiseptics, the difficulty is tenfold increased when we come to consider the value of antiseptics administered *internally*, whether when given by the mouth and absorbed from the alimentary canal or exhibited by subcutaneous methods.

Under these circumstances the problem of the reaction between the cells of the tissues and the antiseptic is of vital importance, and still it is one of which little practically is known. In considering the internal administration of antiseptics it will be necessary to approach the subject under three heads:

1. Do the antiseptics, when administered internally, produce an antiseptic condition of the blood, and the tissues of sufficient concentration to check or arrest the growth of micro-organisms?

2. Do they produce this effect by reacting upon the tissues themselves, and thus enabling them to resist the attacks of the germs?

3. Do they produce their effect by neutralizing the toxic products of the microbes?

1. The internal administration of antiseptics in sufficiently large doses will undoubtedly produce a marked antiseptic action in the alimentary canal, prior to the time when they become absorbed into the blood capillaries and lymphatics, but some of them are very diffusible, and soon make their appearance in the urine, by which channel most of them are very rapidly eliminated. Take, for example, sodium salicylate, which will appear in the urine in from five to eight minutes after administration by the mouth. Thus it will be recognized that the length of time taken by the absorption and the rapidity of elimination of a drug must exert a very distinct effect upon any possible degree of saturation to which the system may be subjected by its exhibition.

This, however, is not the only view to be considered in this relation, for although absorption of an antiseptic may take place, yet during that process there appears to be a very great chemical change brought about in the substance ingested.

The great difficulties which beset such a line of observations are, with our present limited knowledge of physiological chemistry, almost rendered insuperable. Baumann has pointed out that carbolic acid, if administered by the mouth, may be found in the blood as sulpho-carbolates, chiefly of soda, which, though they still possess an antiseptic power, it is of a very much milder nature than the one from which they have taken origin; similarly, again, salicylic acid is transformed into salicylate of soda, and is eliminated as such.

With the view of comparing the power of higher forms of life with the power of *germs* to resist the action of antiseptics, even in very dilute solutions, Richet has conducted some very interesting observations upon fish. He placed fishes in salt water, to which had been previously added sufficient organic matter to allow germs to grow and multiply, but not enough to interfere with the well-being of the fishes. The degrees of concentration of the various antiseptic metallic compounds which could be resisted by the fish, and the effect of the same upon the germs employed, was observed, with the following results:

COMPARATIVE TOXIC INFLUENCES OF THE METALS IN COMBINATION UPON MICROBES AND FISHES.

Metal.	Minimum Dose Expressed in pounds per liter.	
	Arrests Putrefaction.	Kills Fish in Less than 48 Hours.
Mercury	0.0055	0.00029
Zinc	0.026	0.0084
Copper	0.062	0.0033
Cadmium	0.040	0 017
Iron	0.24	0.014
Nickel	0.18	0.125
Barium	9.35	0.78
Lithium	6.9	0.3
Magnesium	7.2	1.5
Ammonium	18.7	0.064
Calcium	30.0	2.4
Sodium	43.0	24.0
Potassium	59.0	0.10
Manganese	7.7	0.3
Cobalt	.....	0.125

Medium Employed—
Sea Water.....900 grammes.
Neutralized Urine.....100 grammes.
Peptone..... 1 gramme.
at 20°C.

The results which were thus gained indicate clearly that the more active antiseptics were much more fatal to the fishes than to the germs, and that in solutions of such concentration as would kill the fish, germs would not even be impeded in their growth.

Too much reliance, however, must not be placed on these results, for although it may not be possible to so saturate the blood, lymph and tissues with an antiseptic as to kill any microbes that may be present, still sufficient may be absorbed without disastrous effect to check and hinder, to some extent, the growth and development of the micro-organisms.

The experiments of Chamberland and Roux have pointed out that very small quantities of some chemical reagents (carbolic acid and potassium bichromate) added to culture media, though not in sufficiently concentrated solution to arrest, but only in some degree to inhibit the growth of the bacillus anthracis, may alter its morphological appearances. This does not appear to be due to any real alterations in the specific characteristics of this organism, but merely a general weak-

ening of its vital power, for no reliable observations have yet been made which will allow the conclusion to be arrived at that by alteration in the processes of culture, or in the nature of the cultivating media, one specie of micro-organism can be merged into and acquire the characteristics of another.

It is, therefore, not an unreasonable hypothesis to adopt that by the continued administration of a suitable antiseptic the blood and lymph, though the latter not so readily as the former, may be brought into such a condition of saturation with an antiseptic that, though the antiseptic may not be present in them in sufficient quantity to arrest the growth, it may be able to inhibit or to alter the vital activity of the micro-organism, so as to render them less virulent, or even inocuous.

The fact is well established that certain chemical preparations, when administered by the mouth, are to be found being eliminated by the various channels of excretion, and, in the case of some of the simpler inorganic salts, unchanged. Hence we are led to the conclusion that they have, in all probability, been absorbed, circulated and discharged without their chemical combination having been broken up. Though this view may hold good for the more simple, it certainly does not for the more complex compounds, the organic combinations being subjected to very elaborate changes when within the circulation, with the result that many varied derivatives are produced from them.

It is also not at all unlikely, as has been mentioned already, that those reageants which exert a marked antiseptic action outside the body may, when absorbed form some entirely different and feebly-germicide product, or even a neutral compound with some of the albuminates or salts of the blood, and so render no material assistance to the object in view.

2. Do antiseptics react upon the tissues of the body, and thus enable them to resist the attacks of the germs?

A large share of the work of destruction of microbes within the body has, by many, rightly or wrongly, been attributed to the white cells of the blood, and with the inference that a small increase in the activity of their functions may cause a more rapid diminution of the microbes. Very little attention has yet been devoted to the study of the action of antiseptics upon the activity of these cells, but Pohl has, in an elaborate research, shown that an increase at any rate in number of the white cells could not be noticeably traced to those antiseptics which have the most prominent position as such. Much more work is needed under this head before any satisfactory facts can be advanced.

3. Concerning the last theory of the possible power that the antiseptics administered may neutralize the toxic effects of the ptomaines produced, anything that may be said is merely a question of speculation.

It is fully recognized that these ptomaines are produced, and that they check the further progress of the germs that produce these is also appreciated, but when they are developed within the body, in many instances at least, they appear in quantities that the system falls a victim to their presence before the micro-organisms can be affected.

[Written for the MEDICAL BRIEF.]

Insomnia and Its Treatment.

BY FRANCIS EDMUND CLAY, L. R. C. P. (LOND.), M. R. C. S. (ENG.).

Fellow of the Guthrie Society.
Honor Oak, London, England.

I know not whether insomnia should be regarded as a disease, a malady, a disorder, or merely a symptom. Nor do I know how to define it, unless it be by saying that it is a lessening or diminution in the normal amount of sleep. This, however, is not a real definition, for the number of hours of sleep needed for the maintenance of health varies in different people, and at different periods of life of the same individual. A robust, active, energetic man, in his prime, can do with very little sleep, whilst young children, and, at the other extremity, those full of years, pass the greater part of their lives in sleep, or, at all events, in a condition of somnolence.

It is probable that most of us spend nearly a third of our lives in sleep, and it

is said that sleep is more necessary than food. We have some rough idea, thanks to the exhibitions of fasting men, and, especially to those cases in which miners have been kept in forced confinement, as to how long life may be maintained without food, or, at all events, with the absolute minimum of nourishment. Many of these so-called records are open to considerable doubt and suspicion, but probably a healthy man could bear an enforced abstinence from food for four or five weeks. How long he could survive if deprived of sleep I do not know, but probably not for many days. "Deprived of rest all prematurely die." It is said that in China prisoners are sometimes tortured by keeping them awake, but I do not know that there are any authentic statistics bearing on this point. It is not uncommon to hear women say that they have had no sleep for weeks, but this is probably illusive, and snatches of sleep have been taken from time to time. The average patient who says that he has not had "a wink of sleep all night" has, probably, slept from three to four hours. His statement that he has heard the clock strike every hour during the night is true, but the clock rouses him for a moment, and he then continues to sleep again. Men, overcome with fatigue, will sleep in the standing position, and even when riding on horseback. The whole subject is full of interest, but presents many difficulties. I am inclined to say, in the words of Tristram Shandy, "I wish I could write a chapter on sleep; it is a fine subject."

There is no doubt as to the recuperative power of sleep, and this has been referred to by writers in all ages. Miguel de Cervantes, in Don Quixote, says: "Now blessings light on him that first invented sleep! It covers a man all over, thoughts and all, like a cloak; it is meat for the hungry, drink for the thirsty, heat for the cold, and cold for the hot." Edward Young, in *Night Thoughts*, speaks of it as: "Tired nature's sweet restorer, balmy sleep!" Whilst Coleridge, in the *Ancient Mariner*, says:

> "O sleep! it is a gentle thing
> Beloved from pole to pole."

Clearly, insomnia may be divided into two primary categories, (1) acute insomnia and (2) chronic sleeplessness. The acute cases are by far the most serious, and may be regarded as constituting a distinct disease. They may be the result of prolonged strain or overwork; the most typical example of this is seen in nursing a near and beloved relative. When the life of a husband or child hangs in the balance, the wife or mother will remain awake and watchful for days together. It is bad enough in acute pneumonia, where a crisis may be reasonably expected in from five to eight days, but the strain is much more severe in enteric fever, where the result is in doubt for four or five weeks, or even more. Incidentally, I may mention that I have known cases of typhoid fever where, as the result of a succession of relapses, the patient has remained in a typhoidal condition for three months. In the tuberculous meningitis of children the patient may hang on in a practically hopeless condition for weeks, or even months, until the mother is completely worn out with watching and anxiety. One of the worst cases of acute insomnia which came under my notice was that of a man whose wife was arrested for procuring goods and then pawning them, the offense being committed at his instigation.

In addition to the acute cases, it is not uncommon to come across intermittently acute cases. A friend of mine, a well-known physician, suffers from this form of the complaint. He is habitually a poor sleeper, and from time to time, without any apparent reason, gets attacks of complete insomnia, lasting for three or four days. On one occasion, during a more than usually severe attack, he went on a week-end visit to a country house. In the middle of dinner, and to the surprise of his hostess and fellow-guests, he fell fast asleep, and could not be roused. He was carried up to bed, where he slept heavily for forty-eight hours, waking up perfectly well, but unconscious of what had happened.

Cases of chronic sleeplessness, possibly alternating with attacks of drowsiness, may often be traced to some organic disease or derangement of function of some of the important viscera. In cardiac valvular mischief this condition is not infrequently met with. In the senile vascular change, associated with some forms

of Bright's disease, the patient complains that he readily drops off to sleep, but as readily awakes, and this he may do a dozen times in the course of the night. In cases of chronic constipation, especially when there is a sluggish condition of the liver, rest is often much disturbed. This is probably a toxic condition allied to the copremia, which is supposed to be a factor in the production of anemia. Speaking generally, it may be said that whatever disturbs or alters the cardiac rhythm or interferes with the blood supply to the brain and nerve centers, interferes with sleep. Another example may be found in cases of convalescence from the acute specific diseases, such as the exanthems, enteric and other continued fevers, erysipelas and, above all, influenza. Gastric and intestinal disorders, and the associated dyspeptic and flatulent conditions, are responsible for a certain proportion of cases, as are the poisons of gout and rheumatism.

It is well known that some beverages interfere with sleep, the most familiar examples being tea, coffee and cocoa. It is a common habit to take early tea in bed to dispel the last traces of sleep. We take alcohol at bed-time to woo, and tea in the morning to drive off sleep. Many people say that black coffee taken at night keeps them awake, but, on the other hand, tolerance is soon established, and after a few nights the habit may be indulged in with impunity. The custom of taking a liqueur with the post-prandial coffee probably acts in two ways (1), as an aid to digestion and (2) by counteracting the effect of the caffeine on the nerve centers. Alcohol, in the majority of cases, induces sleep, but exceptionally, and in persons who do not employ it habitually, it causes restlessness, possibly by overstimulating the heart and circulation. A similar idiosyncrasy is observed with tobacco, although nicotine, to those accustomed to its use, acts as a sedative, and may be taken with impunity in the form of a pipe or many pipes, even up to the moment of retiring to rest.

There are certain drugs which prevent sleep, and in this category must be included opium and morphine in persons who have employed them so constantly that they cease to exert their customary narcotic effects. I have known cases of persistent sleeplessness induced by coca wines, and especially by cocaine. The cocaine habit is much on the increase, and many people continue taking cocaine without realizing the harm they are doing. They probably commenced by purchasing cocaine tablets, or lozenges containing cocaine, menthol and rhatany for a relaxed sore throat, and the habit grows up imperceptibly. In every case of sleeplessness care should be taken to ascertain if the patient is taking or has recently been in the habit of taking drugs.

The late Sir William Broadbent, some years ago, pointed out that by far the most common cause of sleeplessness is gastro-intestinal derangement, especially when associated with flatulence, and while distention of any part of the alimentary canal may give rise to dreams and broken rest, or definite wakefulness, it is gastric dyspepsia which gives nightmare, and dilation of the stomach which produces the most serious and obstinate sleeplessness. He points out that, associated with the sleeplessness, there is often a degree of depression, which is not explained by the mere loss of rest, together with irritability, and a tendency to look on the dark side of affairs. One of the first things, therefore, to be done in a case of sleeplessness, he says, is to inquire carefully and thoroughly into the state of the digestion, and to make a physical examination of the abdomen. Any derangement which may be discovered must be rectified. One form of sleeplessness is so common in association with dilation of the stomach as almost to be characteristic. The patient goes to sleep at once on getting into bed, but in one, two, or three hours wakes up with remarkable punctuality; it may be quietly, without obvious discomfort, or with a start or bad dream, or actual nightmare, or with violent palpitation or pain in the region of the heart, or in profuse perspiration. He is at once particularly wide-awake, and the brain seems to be prenaturally active. If he has worries they crowd into his mind, and are set down as the cause of his wakefulness; if he has no definite troubles, he invents or goes in search of them. The explanation of the waking up at a given time is that the stomach, not having got rid of its

contents, fermentation of the stagnant matters takes place, and, after a certain time, sufficient gas and acid are produced to put an end to sleep. Sometimes a hungry, sinking feeling is experienced, and some form of nourishment is taken, after which the patient may sleep, and he attributes the waking up to exhaustion. The sleep, however, is due to the displacement of gas by the food taken, or to the dilution of acrid matters in the stomach. A dry biscuit is often more effectual than liquid nourishment. It is noteworthy that such patients make no complaint of flatulence, although the stomach resonance may be very extensive and tympanitic, and may invade the chest up to the fifth space or rib. When we are conscious of flatulence, it is not of the presence of gas, as such, but of the attempt to get rid of it, or to pass it on by peristalsis. In such cases the diet must be simplified, and the stomach must never be distended. The amount of bread and other farinaceous foods, of green vegetables, and of liquid with meals, must be restricted.

I can from personal observation confirm these remarks.

I should like, in connection with this particular phase of the subject, to call attention to a few prescriptions from the clinique of Professor Albert Robin, of the Hôpital Beaujon, of Paris, which I have found especially useful in the treatment of dyspepsia due to fermentation.

For ordinary fermentative dyspepsia, in addition to the regulation of the diet, the patient is recommended to take, after each meal, a hot aromatic bitter infusion with one of the following powders in a little water:

R	Sodii Bicarb.	1 drachm.
	Magnes. Hydrat.	1 drachm.
	Sacchar. Alb.	1½ drachms.
	Cretæ Præp.	1½ drachms.
	Ess. Anisi Vel. Menth. Pil.	15 minims.

M. Ft. pulv. 12.

When the pain and distention are very marked, the following powder may be substituted:

R	Magnes. Hydrat.	25 grains.
	Sacchar. Alb.	25 grains.
	Sodii Bicarb.	15 grains.
	Bismuth Subnit.	12 grains.
	Cretæ Præp.	12 grains.
	Codeini	1/12 grain.
	Ess. Anisi	2 minims.

M. Ft. Pulv.

For lactic acid fermentation nothing, says Robin, will be found more useful than the fluorides, which may be given as follows:

R	Ammonii Fluoridi	5 grains.
	Aq. Destill.	10 ounces.

M. Sig.: One tablespoonful to be taken twice a day at meals.

For gastric intolerance, with constant vomiting, nothing will be found more useful than the following:

R	Picrotoxin	1/12 grain.
	Alcohol pro dissolv.	q. s.
	Morph. Hydrorchlor.	1/12 grain.
	Atropinæ Sulph.	1/64 grain.
	Ergotini	15 grains.
	Aq. Laurocerasi	½ ounce.

M. Sig.: Filter after mixing. Five drops before each meal in a teaspoonful of water. Not more than twenty-five drops to be taken in the day.

It will be noted that the quantities are given in grains and not in grammes.

Attacks of insomnia may be due to causes which, at first sight, appear to be trivial. In one case, I traced it to an ill-fitting denture. The false teeth were uncomfortable, and the patient took them out at meal times. His food was imperfectly masticated and imperfectly digested, the result being much flatulence and little sleep. In another case I traced it to spongy gums—the familiar *pyorrhea alveolaris*—the mode of action of which is apparent. Some little disturbance in the well-established custom of a lifetime may be the source of the trouble. For example, an alteration in the dinner hour temporarily upsets elderly people, and interferes with the digestion. An acute attack of total abstinence in people who have been accustomed to a moderate amount of alcohol will cause irregular or fitful sleep. Nurses, who have been on night duty, find that on taking up day work they are for a time unable to sleep. The list might be prolonged almost indefinitely.

With regard to the treatment of this condition, I am not much in favor of giving drugs, although I must admit that in the acute form a hypodermic injection of morphine or, better still, of morphine and atropine, is useful. Incidentally, I may mention that the injection should be given when the patient has actually retired for the night; after its administration the order should be for "lights out" and no further conversation. But in the more chronic forms I think it a mistake to resort to hypnotics, and I believe that many of them are distinctly dangerous. The great point is to seek out and leg-

islate for the cause of the condition. For example, if caused by dyspepsia, a gentian and soda mixture, a quarter of an hour before each meal, will afford prompt relief. If there is acidity, a small dose of bicarbonate of sodium, or of salvolatile, on retiring to rest, will effect a cure. If there is much flatulence, a dose of oil of cajeput, or of pure terebene, or of tincture of capsicum, or of spirit of horseradish, is all that is necessary. If there is a condition of goutiness, a few doses of colchicum wine, or, better still, of colchicine, is indicated. Constipation should be relieved by a compound colocynth pill, and if the liver is inactive, calomel, often in large doses, is effective. I rely on these simple remedies practically to the exclusion of the hypnotics. I see no objection to a single dose of twenty grains of bromide of potassium at bedtime, for it has no untoward effects, but beyond that I will not go.

I attach much importance to hygienic measures, and am a strong advocate for open windows, especially in the country. No one can expect to sleep well unless he takes a fair amount of open-air exercise. Even elderly people should take exercise. "Rest is the sweet source of labor." The mind should be pleasantly occupied, and the patient should be advised to take up some systematic occupation, even if it be only reading. Games, such as whist, bridge and chess, keep many people awake, probably by over-stimulating their cerebral centers. I have even known people kept awake by an exciting game of billiards or pool. Pillows containing hops and other aromatic drugs are sometimes recommended, but their action is purely suggestive. Massage and electricity may suit some people, but they can never take the place of exercise.

"The ingredients of health and long life are great temperance, open air, easy labor, little care."

I freely admit that the problem is complex, and I wish especially to emphasize the fact that each case must be treated on its own individual merits. Better by far to rely on the advice of a well-informed physician, conversant with the peculiarities and idiosyncrasies of the patient than on any one remedy supposed to be applicable to all cases. It is only by attention to minute details that we can hope to win back "Life's nurse sent from heaven to create us anew, day by day."

[Written for the MEDICAL BRIEF.]

A New Operation for Retro-Uterine Displacements.

BY W. O. HENRY, M. D.,

Professor of Gynecology in the John A. Creighton Medical College; Gynecologist to St. Joseph's Hospital and Omaha General Hospital. Omaha, Neb.

The varied lines of treatment suggested for retro-uterine displacements, and particularly the numerous operations suggested for this form of trouble, prove that displacements are extremely common, and that none of the methods hitherto suggested have been wholly satisfactory. Bearing this in mind, I have been led during the past few years to plan and devise an operation that has proven very satisfactory. I have not, as yet, had any cases which were followed by pregnancy, and therefore am unable to state whether the result of the operation will interfere with normal pregnancy or not, although I see no reason why it should.

Every gynecologist knows that when the uterus is placed in proper position, even though the body be unusually heavy, it is not difficult to retain it in this position, so that any operation which will gently draw the body forward will suffice to retain it in this position without any great amount of force or traction. The operation which I have devised is based upon the fact that the uterus normally, is held in position chiefly by various ligaments, and the body inclined forward, both by the vesico-uterine and round ligaments, and perhaps, also, by its own muscular structure, and when once brought forward a very slight ligament of any kind which bends it well forward under the symphysis pubic will retain it there very nicely.

Martin's operation, which was done through the vagina, detached the bladder from the uterus, pulling the uterus downward and then sewing the bladder to the body of the uterus higher than its normal attachment. This succeeded very

well in holding the body forward, but it produced an unnatural condition, leaving a long cervix and deep anterior fornix, so that while it produced a fairly good result, there remained this unnatural condition, and the difficulty of knowing just what was in the pelvic cavity (I refer to the condition of the tubes and ovaries); and to this was added the difficulty of doing the operation through the vagina, the danger of infection and of cutting into the plexus of veins, thus interfering with good union. All of which was rather against the Martin operation.

The operation done by me I consider a good substitute for the Martin procedure. I open the abdominal cavity in the median line, bring up the uterus, break up all adhesions, do whatever plastic work is necessary on the adnexa, and then scarify the anterior surface of the uterus and posterior surface of the bladder for one-half inch or more in depth, then sew the base of the bladder and the vesico-uterine ligaments higher up on the anterior wall of the uterine body with a No. 2 catgut suture. By this method I have no new bands around which loops of intestine or omentum can become attached or produce any kind of obstruction in the abdominal viscera. We thus get an adhesion between these parts so that Nature throws out an extension, which she forms into new connective tissue; and thus following Nature's plan we have simply extended a little higher on the uterine wall the natural ligaments which hold the body of the uterus forward. After a few weeks this tissue is so thoroughly organized that the union is very firm, the patients do well after operation, exhibiting no bladder symptoms nor difficulty of any kind.

I have had some ten or twelve cases treated in this manner, and so far as I know, only one of them has had any recurrence of the displacement, and that was in an early case in which I failed to bring the uterus far enough forward to get the desired result.

I have shown this operation to a number of men who expressed themselves as strongly in favor of it. Of course, too few operations have been done, and the cases have not yet been observed sufficiently long to know what the ultimate result will be, but it seems to me that this procedure is along the line of the ideal operation for retro-uterine displacement.

McCague Building.

[Written for the MEDICAL BRIEF.]

Infections of Gall Bladder, with Report of Cases.

BY SHERMAN LEACH, M. D.,

Professor of Surgery and Clinical Surgery in the Starling-Ohio Medical College.
Columbus, Ohio.

The function of the gall bladder is to act as a store-house for the excess of bile which is not needed in the process of digestion. When bile is contaminated with bacteria it becomes thickened and inspissated, and soon granular masses form, around which there is deposited the various bile salts to form the so-called gall-stone. With the gall-stone once formed more traumatism is produced and more inflammation occurs. With an increase in the destructive process of the mucosa, and in case the stones are of such size that they find their way into the ducts, we have the same injury inflicted upon the mucous lining of these channels.

When an individual suffers from an attack of biliary colic it does not necessarily signify that stones are present in either the gall bladder or bile ducts. The condition may be due to a stricture or kinking of the ducts, and the colic results from a contraction of the muscular fibers of the gall bladder in its effort to overcome the obstruction. Neither is colic any longer looked upon as the most important symptom *per se* of gall-stones or an infected gall bladder; other symptoms are of greater value. A few years ago a diagnosis of gall-stones was seldom made unless the patient gave a distinct history of biliary colic, followed by marked jaundice and the finding of one or more stones in the stool. At the present time we arrive at a diagnosis by considering another set or class of symptoms, and depend upon the above mentioned as corroborative.

Considerably less than fifty per cent of all gall-stone cases give a history of colic or jaundice, but all of them give a history

of gastritis, dyspepsia, bloating of the stomach and intestines, together with tenderness over the gall bladder region. More or less pain is complained of, and usually radiates to the right shoulder or subscapular region. The point of greatest tenderness is located between the margin of the ninth costal cartilage and umbilicus, and is best elicited by directing the patient to take a full inspiration, at the end of which a sharp tap will invariably be followed by marked pain and tenderness.

My personal experience leads me to believe that the most constant symptom, and the one invariably present, is the gaseous formation in the stomach and bowel. The number of cases operated for the relief of gall-stone colic constitute a very small percentage as compared with the large number treated surgically for the relief of the gastric disturbance. In only two or three out of a dozen or more cases operated during the past two months was there a distinct history of biliary colic. There was, however, a distinct history of gastro-intestinal disturbance, and in every case pain and tenderness which varied in severity according to the amount of inflammation present about the gall bladder.

The pulse and temperature very infrequently serve as a criteria to the existence of stones or the presence of an infected gall bladder. Even in the presence of a suppurative gall bladder we frequently find no increase in the pulse rate or temperature, as is well shown in the following case history: Mrs. H., aged forty-one; weight, two hundred and seventy-five pounds; had suffered from gastric disturbances and irregular attacks of vomiting for over two years. Pain, of a vague character, was occasionally complained of over the region of the gall bladder. The patient's habits of living were most irregular, and her daily diet consisted largely of Dutch lunches, and other indigestible articles, together with beer, wine and whisky. On the twentieth of last December she had one of the usual attacks of gastritis, which was characterized by marked "bloating" of the stomach and intestines; gaseous eructations and tenderness over the right hypochondrium. Pain was complained of in the region of the appendix. At no time had the patient suffered from an attack of biliary colic, and she was never jaundiced. She was under the care of a very excellent physician, who, suspecting an infection of the gall bladder, asked me to see her in consultation, January 2, 1906. She presented the symptom-complex already given; the pulse was seventy-six, and the temperature normal. I corroborated the diagnosis of an "infected gall bladder," and advised operation, which was made January 9, 1906. On opening the abdomen I found the gall bladder surrounded by dense adhesions, filled with ten to twelve ounces of pus and a gall-stone the size of a walnut. This case, together with many others I might mention, demonstrates clearly that the usual signs of gall-stones are rarely present; also, that we may have an empyema of the gall bladder without an elevation of temperature or an increase in the pulse rate. In this case the predominating symptoms were the gastro-intestinal distention, the pain and tenderness at a point midway between the ninth costal cartilage and the umbilicus.

In another case, a woman aged seventy-one was treated by a specialist for nasal trouble. A few weeks after the nasal operation, and before the wound had healed, she developed a pain in the right hypochondriac region, an increase in the pulse rate, and a high temperature. I saw her in consultation. She had never had an attack of biliary colic, nor had she been jaundiced, but gave a history of "stomach trouble," gaseous distention of the stomach and bowels, yet persisted in saying that she was not a dyspeptic in any sense of the word. From her history of pain, the existing tenderness and swelling in the region of the gall bladder, together with the rapid pulse and temperature of 103° F., a diagnosis of suppurating gall bladder was made, and an immediate operation advised. She was operated on the following morning, when six or eight ounces of pus, and seven small stones were removed.

Another case operated a few weeks ago, gave all the usual symptoms, together with a palpable tumor. One year passed from the examination until operation. The tumor disappeared during the in-

terim, and the patient lost one hundred pounds in weight. The loss of weight, of course, suggested the possibilities of cancer. The gaseous distention was the prominent and troublesome symptom. At the time of operation twenty-six stones were removed. In another case, a woman aged forty-one, who had had several attacks of colic, but no jaundice, complained of a persistent and troublesome accumulation of gas in the stomach and bowels. She had a peculiar tinting of the skin, a complexion suggestive of nephritis, but other than this nothing that would point to gall-stones. She was operated, when extensive adhesions were dealt with, and twenty stones removed.

A case operated a short time ago had no other symptoms save the "gas sign." He had lost considerable weight, yet showed no marked cachexia. At operation the gall bladder was found filled with stones, and the seat of a well-advanced carcinoma. Another patient who left the hospital only a few days ago had experienced two or three attacks of colic, and was jaundiced after each paroxysm. The "gas sign" was ever present. An operation was made, when five stones, four in the fundus of the gall bladder and one well down in the cystic duct, were extracted.

Another case operated at a local sanitarium demonstrates to a nicety the reason why physicians so frequently overlook gall-stones owing to the prominence given to persistent stomach symptoms. The patient, a man of means, and a dentist by profession, had consulted the most able physicians of New York and other Eastern cities, as well as prominent medical men in the West. He was invariably told that he had gastritis, and was advised to take treatment at the various sanatoria and springs for its cure. He became addicted to the use of morphine during his long period of sickness, and was finally told that he was suffering from "morphine pain," and was sent to the Park View Sanitarium for its cure. He had been under treatment for ten or twelve days; the morphine had been entirely discontinued, and he was apparently progressing nicely, when, on Sunday night, he began to suffer from one of his sick attacks of "stomach trouble." Later his condition became so serious that I was called in consultation. His suffering was so intense that it was impossible to examine him, so I advised a half-grain of morphine, which was reluctantly given. I visited him early the next morning when I found him quite free from pain, and the abdominal muscles so relaxed that I was able to make a very satisfactory examination. After obtaining a detailed history, and thoroughly examining the patient, I made a diagnosis of gall-stones, and advised immediate operation, which was made on the afternoon of the same day. On opening the abdomen I found the omentum, duodenum and stomach closely adherent, and the gall bladder distended to its fullest capacity. The adhesions were freed, and the gall bladder aspirated of six ounces of viscid mucus. Six stones were removed, one of which had found lodgment in the cystic duct. From the time of the operation up to the present, he has had no use for morphine, has regained his lost weight (seventy-five pounds), and returned to the practice of his profession.

It is my wish to impress upon your minds the importance of not overlooking gall-stones simply because the patient gives no history of gall-stone colic, or of having been jaundiced at any previous time. Of far greater importance than either is the "gas sign;" then, if in addition, a history of colic or jaundice can be elicited, you may feel that your opinion of "gall bladder disease" is further corroborated. Moynihan puts it forcefully when he says "if one wishes to frame an epigram, it could be said with truth that the most common symptom of gall-stones, is indigestion."

In this connection it is interesting to note that persons may have gall-stones, and their existence during life unaccompanied by symptoms, and found only through accident, or at *post-mortem*. Personally I am of the belief that if a detailed history could be elicited, every patient (with a very few exceptions) would confess to having had, at some time, a trend of symptoms referable to the digestive tract. However, in a few cases where gall-stones have been accidentally discovered while making some other operation,

a subsequent history has failed to show any symptoms which would indicate their presence. While this is true, I thoroughly believe that in such cases all we would need to do in order to make their presence known, would be but a slight infection of the gall bladder, the impaction of a stone in the cystic or common duct, or a disturbance or disarrangement of the stones in the gall bladder. These changes will likewise explain the sudden acuteness of the symptom complex in many of the cases already diagnosed. Ehret and Stolz, in order to discover the cause of the sudden onset of the symptoms of an acute infection, in cases of cholelithiasis, fed dogs, into whose gall bladders sterilized glass balls had lain for three months, decomposing meats. An acute enteritis followed, and later a purulent cholecystitis developed. The infection was an ascending one from the duodenum, and proves that any decomposing or irritating food may not only introduce fresh organisms, but may tend to increase the activity of the ones already present.

The complications arising from the presence of stones are so numerous and so serious, that it seems to me that there is but one alternative, that is to advise an operation in every case where a diagnosis of an infected gall bladder or ducts has been made, provided no contra-indications exist for surgical intervention.

So many cases of ruptured gall bladder have been reported recently, cases in which the patients have not been previously considered ill, that I can scarcely help feeling that the physician is guilty of a grievous wrong, who, in the light of such reports, will persist in the administration of sweet oil and phosphate of soda, hoping to cure his patient, when he knows it can do nothing more than palliate. If, for any reason, surgical intervention is contra-indicated, the case should be made a medical one, and everything done to make the patient comfortable. In order to do this, we must depend upon internal drainage. Give freely of good, pure water, which will do much, possibly more than medicine, toward accomplishing the desired end. It aids in flushing the kidneys, assists in overcoming constipation, and favors the elimination of all the by-products. Next, by means of internal medication, I have found five-grain doses of succinate of soda beneficial; along with this the phosphate and olive oil if you choose.

The diet is the most important factor, and should not be overlooked. You should eliminate, as far as possible, the starchy foods and sugar, and avoid, at the same time, any over-feeding. Prevent, in every way possible, the decomposition of food products in the intestinal tract, thereby avoiding any additional bacterial invasion. Of equal import is active out-door exercise; walking, horseback riding, etc.

802 N. High Street.

[Written for the MEDICAL BRIEF.]

A Rectal Examination.

BY CHARLES J. DRUECK, M. D.,

Professor of Abdominal and Pelvic Surgery at National Medical University; Rectal Surgeon to People's Hospital; Surgeon to Lakeside and Emergency Hospitals; Member of the Chicago Medical Society. Chicago, Ill.

The object of this paper is to bring before its readers the essentials of an examination of these parts and to assist the physician in making an intelligent diagnosis of his patient's ailment, instead of trusting to luck and a "shotgun" prescription in the form of an injection or application. Many general practitioners overlook details and make a cursory examination of patients suffering from rectal disorders. I have had many such patients report to me whom the doctor had not even examined.

Before we can diagnose or intelligently treat pelvic disturbances, we must learn to inspect and palpate not only the exterior surfaces, but also explore its hollow cavities. A thorough rectal examination not only considers the coats of the last few inches of the alimentary canal, but determines the condition of all of the organs and structures within the true pelvis. In gynecology the rectal examination confirms the vaginal findings, and in diagnosing conditions in the male pelvis it is the only method of actually feeling the parts in question. We can not go into details here, but doubtless every physician has cases at present where the weight of

what has been said will be appreciated. The rest of this paper will be limited to the findings in and pertaining to the rectum; but I urge the reader to remember when exploring these parts that all the pelvic organs are bound together by one grand nerve plexus, and nowhere else in the body are there so many reflex nerve impulses. Frequently a robust man is invalided by direct or reflex disturbances, when very little pathological change can be found. The practitioner who wishes to retain the confidence of his patients must examine the rectum carefully as he would any other part of the body, for the time is past when patients will be satisfied with a placebo. All modern textbooks on surgery find it necessary to incorporate a chapter on diseases of the anus and rectum.

Rectal diseases are always progressive, and an early diagnosis may mean a slight operation, and no absence from business, while later the condition may be so exaggerated as to confine the patient to his bed for weeks or months. Almost every patient who realizes he has a rectal trouble informs his physician that he is suffering from piles, and, I am sorry to add, many doctors accept the patient's diagnosis, and prescribe without ever examining the parts.

The symptoms of rectal abnormalities sometimes draw the patient's attention at once to this particular organ, but again, because of the intimate connection of the rectum and other pelvic and abnormal organs, the symptoms may be so obscure or the onset so insidious that reflex disturbances elsewhere are first complained of, and the patient is treated for disease of some other organ. While the symptoms may refer in general to this part of the body, they do not indicate the specific disease. The odor of cancer or the pain of fissure are characteristic, but they do not in any way indicate any associated condition or disease. The preliminary interrogation of the patient should be systematic, so as to cover carefully and completely the whole case without repeating. It is a good plan to let the patient tell his own history, and for the physician to bring out the patient's age, physical condition and nervous temperament, the duration of the disease and the progress of the symptoms since their appreciation, together with whatever effect they have on the general health. If pain is complained of, ascertain its character; whether it is sharp and cutting, burning, or dull and aching, and its relation to defecation; whether it occurs before, during, or after the passage of the stool, and whether it is constant or intermittent, and its location, as at the anus, within the rectum, in the pelvis, or in the sacrum, or whether it radiates from a given point. The patient's statement that he has pain in the rectum is too indefinite to be accepted without further questioning. If there are any discharges, their nature, and the presence and amount of blood, mucus or pus, are important. If blood is present, find out whether dark or bright. The sphincters must be investigated as to whether relaxed or abnormally contracted, and if protrusions exist; whether they recede of themselves or must be replaced, and whether their replacement is difficult or painful. It is important to ascertain the character of the protrusions, as smooth or nodular, hard or soft, or covered with rugæ, and whether it is tender or sensitive to the touch, and if there are any ulcers present; also, whether it occurs only during defecation or is continuously exposed, or can be produced at will. Any evidence in the general economy of such other diseases as anemia, tuberculosis or syphilis, must be taken into consideration; also, the condition of the kidneys and bladder, and whether the patient has had gonorrhea or any urethral stricture. If a female, and married, how many children or miscarriages, and was there any rupture of the perineum? Is there any uterine or ovarian pain; any vaginal discharge; prolapse of the uterus, or difficulty in urinating? If a virgin, inquire as to the menstruation; whether regular, painful, scant or profuse.

The occupation or mode of life of the patient may not have been a factor in causing the disease, but it may be important in mapping out his future mode of living as to habits, environment and diet. Does he use enemas frequently? Or, like the proverbial Irishman, take his pipe and daily paper to the toilet with him? Does the rectum feel full after the evacuation, or is there a desire for further ac-

tion? Is there a history of sodomy or venereal disease, or any family history of tuberculosis or cancer?

The examination of any case, medical or surgical, is incomplete unless we go into the family and personal history. It is often tedious, and much time is wasted on irrelevant matter, but frequently it emphasizes idiosyncrasies. For convenience, I have arranged all the important items of the examination in an abbreviated but comprehensive form in my record sheet. I want to emphasize the importance of keeping these records in even the simpler cases. One never knows what may develop later.

It is convenient for those treating rectal cases to have a toilet adjoining the examining room, that patients may empty their bowels just before examination. When this is not practicable, and only a few rectal cases are seen, a commode which, when not in use can be screened or easily pushed aside, may be substituted. If possible, a cathartic should be given the day before, and the rectum washed out with an enema just prior to the examination. This procedure is absolutely necessary when the upper part of the rectum is to be examined, as otherwise, when the speculum is introduced, the field may be obstructed with feces, and a thorough examination is impossible; also, because the straining during defecation brings down hemorrhoids, polypi or prolapse, and thus assists in the diagnosis. Even with these precautions you occasionally find a case of impaction, where the rectum is lined with inspissated feces. Occasionally I prefer to make an examination without this preparation, that I may find the rectum more in its customary condition, and any pus, blood, mucus, or hardened feces may be found more readily. Small protrusions or prolapses often retract within the anus when the patient walks a little, hence it is sometimes necessary to examine the patient on the commode, or just after arising, before he takes a step. All constricting bands, clothing or corsets, must be removed or loosened, for they have a tendency to force the bowels into the pelvis. The bladder must also be emptied. It is often necessary to administer an anesthetic to secure a thorough examination of all parts, and to fully relax the sphincter.

Gentleness is important in making a rectal exploration, as much pain may be avoided, and spasm of the sphincter prevented. Very much also depends upon the skill of the examiner, because sometimes the ordeal may be very painful, and doubly so if carelessly performed. Few instruments are needed, and only such as every physician has in his case. In examining the upper portion of the rectum a speculum and good light are necessary. A speculum illuminated with a small electric lamp on a slender shank, clamped into position on the ordinary speculum, is the most satisfactory; but good, direct, or reflected light may be used.

In regard to the position of the patient, the exaggerated lithotomy, the Sims, and the knee-chest positions, each have their special advantages in particular instances. The ordinary dorsal or lateroprone position is all that is needed for the lower rectum, although many prefer the exaggerated lithotomy, the patient's hips being elevated by a cushion. The knee-chest is, however, the only position that permits an examination of the higher portions of the rectum or sigmoid. The Sims' position, with the thighs strongly flexed and the breast on the table, the left arm hanging over the edge, inverts the pelvis and allows the contents to fall upon the front wall of the abdomen; the lumen of the rectum tends to gap, and the mucous membrane falls away from the end of the speculum.

The examination comprises inspection, digital and instrumental examination. Inspection may reveal the conditions which produce various neurasthenic or anemic conditions. The shape of the anus is sometimes important, whether normal, protruded, or drawn in (funnel-shaped), and the amount of pigmentation about the parts. Evidences of abrasions, scratches, pediculior worms, may be seen on the skin about the anus, also signs of inflammation or scars. A prolapsed rectum may be the cause of prolonged vomiting or pertussis. An ulcer, fissure or pruritis may excite rectal tenesmus, and also produce a scybalous stool. Protruding tumors, condylomata, such as hemor-

rhoids, polypi or malignant growths, may also be seen and their characteristics noted. Very often a distinct fullness or bulging of the anus is seen where internal hemorrhoids are present, even if they do not protrude. Where epithelioma exists at or outside of the anus, a small piece may be clipped off for microscopic examination, without any discomfort to the patient, by using a little local anesthetic. After carefully inspecting the anus and perineum, the field may be widened by gently pulling the anus open, a hand being placed on each buttock, the finger tips pointing toward the anus. If the patient bears down at the same time, a considerable portion of the mucous membrane will be everted, the extent depending on the relaxation of the sphincters. In this way, the lower inch or more of the bowel may be inspected without the use of a speculum, and a fissure, fistulous opening, gonorrhea in women, syphilitic erosions, eczematous excoriations or pinworms, may be brought into view. In many instances the internal opening of a fistula is situated immediately within the external sphincter, and, in such a case, it may be seen by this procedure. During this maneuver, any tender or indurated areas may be mapped out. Fistulous tracts are easily followed up without the use of the probe. In women who have relaxed sphincters, a portion of the interior of the rectum may be everted by introducing the index finger into the vagina and pressing the rectal walls out through the anus. The presence of a discharge issuing from the anus indicates disease within the rectum; while the sunken ischiorectal fossæ and retracted anus surrounded by a profuse growth of soft hair would immediately suggest malignant disease or tuberculosis within the rectum, with general systemic involvement.

Digital examination of the interior of the rectum follows inspection, and it is the most important of all methods. The practitioner who is familiar with the digital examination of these parts can diagnose better with his finger than by any other way. Fully eighty per cent of all rectal cases may be diagnosed with the finger, and the other twenty per cent by the history of the case and a specular examination. Digital examination not only confirms the opinion regarding the local conditions found by inspection, but also determines other conditions to which the attention may have been directed. The finger should first be swept around outside of the anus to palpate any induration or tenderness, either superficial or deep, which might indicate abscess or fistula. For internal examination the finger-nail should be well-trimmed, and the finger anointed with olive oil, which is not so easily rubbed off as is soap or vaseline by the sphincter. Whatever lubricant is used must be kept in collapsible tubes, as this is the only method of having clean, sterile lubricant at all times. The cost is little, and the advantages great over the old-fashioned jar of vaseline into which the fingers and instruments were repeatedly dipped, carrying infection from one patient to another. For esthetic reasons, the rubber tissue cot may be worn if desired, because it will not affect the sensibility of touch, and may be washed and anointed. The finger is then gently insinuated through the anus with a rotary or boring motion, the patient being asked to bear down at the same time, and the rectum systematically palpated as high as the finger will reach. The introduction will be rendered much easier if the normal direction of the rectum is remembered, and the finger is first directed up and forward toward the neck of the bladder, until the sphincter is passed, and then backward toward the sacrum. The sphincter is very sensitive, and any undue haste or roughness may induce spasm of that muscle, which will make the examination very painful and unsatisfactory. The iliac fossæ should be firmly explored to determine whether there is any tenderness or tumor. The finger should be introduced its full length, and, by passing the other fingers of the hand back into the intergluteal space instead of doubling them into the palm, an increased reach is obtained; also, if the patient bears down or strains during the examination, one or two inches more of the rectum can be examined.

The condition of the sphincter should be noted; whether it is relaxed, suggesting a debilitated system, cancer, or large internal hemorrhoids, which latter

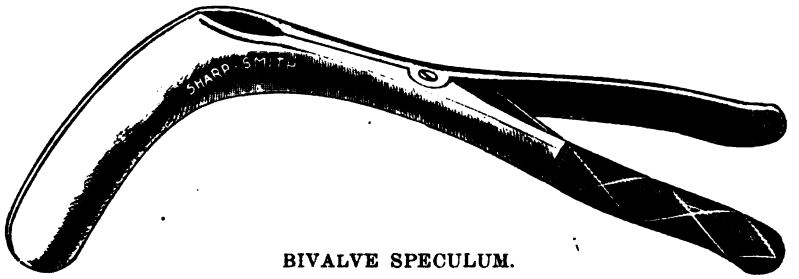
weaken the muscle by frequently protruding; or contracted, signifying acute disease in the anal canal, anal fissure, or a nervous subject; or whether hypertrophied, denoting chronic disease; or, finally, is it atrophied? The spasmodic action should be overcome by slow, steady pressure, as the sphincter is always forcibly contracted on attempting examination. Frequently the internal opening of a fistula is found just within the sphincter, as a rough, indurated and sensitive spot which may be elevated or depressed (ulcerated); or the path of the sinus is felt by its cord-like resistance. If the tumor is felt, its size, shape, location, movability and resistance are to be ascertained, and, if possible, a small piece removed later through the speculum for microscopic examination. Fecal impaction of the rectum or colon has often been mistaken for cancer, polypi, stricture, abscesses; gallstones and other foreign bodies are occasionally felt. The tumor of appendicitis is found in the right pelvis if the appendix is low, and rectal palpation should be practiced in every case of suspected appendicitis. Malignant disease of the rectum or pelvis, the tumor of intussusception or an infected lymph gland may also be felt. Induration or constriction of the walls and the condition of the other pelvic organs is to be determined. Palpation of the prostate may reveal enlargement, induration, tenderness or soft points. The uterus and appendages should always be examined. Vesical irritation is a frequent source of reflex disturbance, and the bladder always should be examined. A stone may be found to be the origin of the trouble, although no symptoms were manifested. A digital examination through the rectum often assists considerably in diagnosing diseases of the urethra, Cowper's glands, seminal vesicles, bladder, vagina and pelvic bones; also, tumors and abscesses of the peritoneal cavity, dislocation of the femur, ischial hernia and aneurysms of the gluteal artery. Very little information is gained by digital examination regarding hemorrhoids, except in rare cases, where much hypertrophy has occurred in the mucous membrane. Otherwise, the hemorrhoid being covered with nearly normal mucous membrane, gives no differential tactile sensation. Thus you see a digital examination through the rectum is imperative in any case indicating disease below the pelvic brim. On withdrawing the finger it may be covered or streaked with blood, pus or mucus, each with its own significance. If a stricture is so small as not to admit the passage of the finger, no force should be used, as rupture of the bowel has followed such an attempt. The cervix, the fundus of the uterus, or the prostate may be mistaken for a tumor. In rare instances it may be necessary to introduce the whole hand into the rectum, but as the walls are so crowded upon the fingers, and the folds of mucous membrane fall in between the fingers, very little knowledge is obtained, and there is always the danger of rupturing the bowel. A laparotomy and intra-abdominal palpation is preferable when the disease is high in the rectum or in the sigmoid. A digital examination carefully performed, is not painful unless a fissure is present.

WALES' BOUGIE.

Instrumental examination—Bougies.—That part of the rectum beyond the reach of the finger may be examined by means of bougies or sounds, although their use is open to criticism, and is often contraindicated. Only soft, flexible rubber instruments should be used (Wales' bougies), and these must be handled with great caution. They should be hollow, to permit the injection of fluid through them into the part beyond, thus dilating the rectum in advance, and effacing any folds that might obstruct their introduction.

Too great value must not be placed on bougies, as their field of usefulness is limited, and even in a healthy bowel the sensations of obstruction often are obtained, and may be misleading. I have yet to see a student who did not find a stricture

the first time he introduced a bougie, because the sound often impinges on the wall of the bowel between the fold of the gut, and a stricture is erroneously diagnosed; or it may strike the uterus or prostate, or the promontory of the sacrum. There is always danger of a metal or hard-rubber sound penetrating the bowel, especially in cancer or ulcerations. Sometimes the so-called third sphincter, which is only a semi-lunar, transverse fold of the anterior and right sides of the rectum, about six to eight centimeters above the anus, may catch the bougie. Normally the bougie may be introduced with care to the middle of the sigmoid flexure. If the mesocolon of the sigmoid is very long, the bougie may be felt on the right side, and lead the examiner to think it had perforated the bowel.

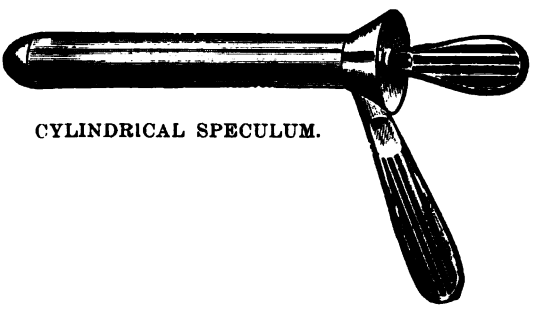


BIVALVE SPECULUM.

Probes.—The probe has no place in the diagnostics of rectal diseases, and very little in the treatment, except in fistula. Even here its value is very limited. Irrigation and injections are sometimes used for diagnostic purposes, and are best accomplished in the knee-chest or dorsal position.

Specula.—The speculum corroborates the digital findings, and aids in the diagnosis where the finger fails, but by no means supersedes the latter. It is indicated where obscure hemorrhage, pain or discharge is an important symptom. The internal openings of fistula may be seen, especially if the discharge escapes during instrumentation. Internal hemorrhoids usually drop into the instrument, and are easily seen. The decision as to which is the best speculum depends upon which one you are more familiar with. Each instrument is constructed differently, but the more rectal examinations you make the less you will use the speculum. The smooth blade bivalve causes much less pain than the wire blades, but it obstructs the field of vision, and exposes only a small area at one time, and the speculum must, therefore, be rotated.

The cylindrical speculum permits of the most thorough work. With the patient in the knee-chest position and a speculum five inches long and one inch in diameter, the whole length of the rectum may be examined. Such a speculum is provided with an obturator to facilitate its introduction, which should be accomplished without much pain. When the obturator is withdrawn, the air rushes in and dilates the bowel, and the whole rectal wall may be inspected by moving the introduced end about, at the same time



CYLINDRICAL SPECULUM.

gradually withdrawing the speculum. The mucous membrane directly in front of the speculum is flattened out and viewed easily by gently pushing the speculum up after the obturator has been removed. By putting the patient under the influence of a general anesthetic, many of the obstacles to the examination are removed, and the field may be explored thoroughly; the sphincter completely relaxes, pain is obviated, but in such cases it is well to be prepared to do any necessary surgical treatment in order to avoid a second anesthetic. When the patient is anesthetized an ordinary flat retractor frequently makes a very satisfactory speculum. A cylindrical speculum ten to thirteen inches long, may be introduced, and the sigmoid explored, but as the great majority of rectal troubles are near the anus, a short and wide speculum is preferable.

When a patient is in the knee-chest position, the chest should be well down on the table, and all constrictions at the waist must be removed.

In many instances, owing to local disease or reflex nervous excitement, we find the sphincter abnormally contracted, making an examination very painful, and often impossible without some previous preparation.

599 East Forty-Sixth Street.

[Written for the MEDICAL BRIEF.]

Pharyngeal Adenoids as a Cause of Middle Ear Disease—Operation Without General Anesthesia.

BY W. H. SCHUTZ, M. D.,

Instructor of Operative Ophthalmology and Otology in the Medical Department of the University of Kansas; Chief of the Eye and Ear Department of the Bethany Hospital; Formerly Professor of Eye and Ear Diseases in the College of Physicians and Surgeons; Member of the American Medical Association, Missouri State and Jackson County Medical Societies. Kansas City, Mo.

Symphoid hypertrophy in the vault of the pharynx causes not only aural affections, but is productive of harm in several directions, such as general lack of development of the physical economy through insufficient aerization or oxidization of the blood; naso-pharyngeal catarrh; nervous reflex phenomena; systemic infection, etc., but the purpose of this paper is to deal exclusively with lymphoid vegetations as a cause of ear disease, and especially to call attention to the so-called modified method of their removal without a general anesthetic. Before entering into the subject in detail let us refresh our memory by throwing a side-light on the anatomy and physiology of the pharyngeal vault and glands. The vault of the pharynx is a dome-shaped structure located in the uppermost part of the respiratory tract. It is continuous anteriorly with the nasal fossæ, below with the oropharynx, and latterly by the Eustachian tube, communicating with the middle ears. The bony walls consist of the body of the sphenoid and basilar process of the occipital bone on top. Posteriorly the first cervical vertebra and laterally are the internal pterygoid plates of the sphenoid and petrous portion of the temporal bones. Anteriorly the posterior bony margins of anterior nasal cavities. The mucous membrane of the space is continuous with the nasal cavities, the oropharynx, Eustachian tubes and middle ears. The arterial supply of the pharynx is derived from the external carotid branches of the ascending pharyngeal supplying the greater part of the region. The anterior portion receives terminal branches of the ascending palatine and spheno-palatine from the internal maxillary. The nerve supply is derived largely from the branches of the second division of the fifth nerve, and also branches from the glosso-pharyngeal and spinal accessory nerve. In the posterior wall of the naso-pharynx is situated a structure known as the third tonsil of Luschka, which is composed of lymphatic or adenoid tissue. It is not strictly a racemose gland. The mucous membrane covering these glands is thin, and covered with one layer of columnar epithelium. The structure contains numerous follicles, and is highly vascular. It is a physiological structure, is normally found in children, and should undergo atrophy from the twelfth to the twenty-fifth year of life. When this tissue involves the Eustachian tube, it is known as the tubal tonsil. Whether the enlargement of these glands occurs in utero, or soon after

birth, or after adolescence, it matters little, as the essential condition demanding relief is removal of the obstruction. The relation of adenoid vegetation to midde ear disease is undisputed, and I believe is unquestionably responsible for more than half of the pathological changes in the tympanum. On the other hand, in ninety per cent of the cases of adenoid vegetation there is inflammatory involvement of the middle ear to a lesser or greater degree. The effect on the sense of hearing depends upon the amount, location, duration and continuance of the obstruction. The manner in which these growths affect the ears is not by direct mechanical obstruction of the Eustachian tube, but indirectly by pressure, thereby interfering with the ventilation of the tympanum and with the local circulation, causing a venous congestion, chronic hyperemia and hyperplasia of the mucous membrane lining the Eustachian tube and middle ear, and fostering a general catarrhal inflammation of all the membranes of neighboring cavities. If under these circumstances infection should occur, it may lead to chronic suppurative conditions involving the middle ear with possible destruction of its vital parts, ending in partial or total loss of hearing. There is another class of cases of ear trouble not dependent upon hypertrophy of lymphoid tissue, but upon acute or chronic inflammation of these glands with little or no enlargement. This affection is a frequent cause of otitis media catarrhalis in children. In these cases we find very little adenoid vegetations in the vault, and no obstruction in the act of respiration. In case of an acute inflammation the parts will appear a little redder than normal, covered more or less with thick, tenacious muco-pus varying in color from a greenish white to a greenish yellow. During such attack the middle ear may be involved, producing a subacute inflammation. An external examination will reveal a congested, and probably more or less bulging, membranæ tympani. In the chronic form of the inflammation the membrane covering the pharyngeal vault may be uniformly thickened, except in the regions of the Eustachian orifices, where it is thrown into folds and reduplications, and there may be a few lymphatic nodules irregularly distributed, but no marked hypertrophy of the tissue. The symptoms dependent upon the pressure of adenoids in the naso-pharyngeal spaces are too well known to be enumerated, and so I will pass on to the aural symptoms, which are quite as characteristic as those referable to the post nares. Frequent attacks of earache, tubo-tympanic congestion and hyperemia, and possibly some rise in the temperature. In some instances the membrane will show a slight rupture and some serous discharge, and, again, may terminate in an acute suppurative otitis media. The disturbance of function is sometimes the only feature which attracts attention. Absent-mindedness, listlessness and inattention may be the only complaint, and in these cases you will elicit a history of frequent colds in the head, discharge from the nose, snoring at night, dry, crusted lips, coated tongue, etc., and if patient is old enough, complains of a full or stuffy feeling in the ears in addition to impaired hearing. The pressure of adenoids has a continuous degenerating influence on the ears of the young, and if not removed before adolescence, is prone to produce active and permanent injury in adult life. It is a disputed question to what extent the naso-pharyngeal hypertrophic tissue has been productive of aural lesions. Professor Dench, of New York, is of the opinion that the middle ear changes have resulted from the presence of an excessive amount of adenoid tissue in the pharyngeal vault at an early period of life, and does not depend upon the sclerotic changes which have subsequently taken place in the tissue, although they are similar in character.

The points of differential symptomatology between children and adults suffering with ear affection dependent upon adenoids, is that in the latter reflex phenomena of a neurasthenic type are common. Stubborn cough, with expectoration, bronchial irritation, susceptibility to colds in the head, associated with aggravated aural symptoms, such as shooting pains from throat to ear, tinnitus, vertigo and impaired hearing. There is no doubt in my mind that the cause of many cases of deaf or partially deaf subjects now going the rounds asking relief, can be

directly traced to pharyngeal adenoids in childhood. From the observations of some of our ablest investigators it seems deaf-mutism is frequently dependent upon adenoids. Cases are recorded where hearing was partially restored after removal of these growths. Dr. Frankenburg, in an examination of one hundred and fifty-eight inmates of a deaf-mute institution of Prague, found fifty-eight and one-half per cent had adenoids large enough to fill the naso-pharyngeal space. Of ninety-four persons, fifty-six were boys and thirty-eight girls. Anomalies of the ear were found in fifty-eight cases, and forty of these were pathological modifications, more or less important, due chiefly to chronic and suppurative inflammation. Of these forty-two individuals, thirty-seven presented adenoid vegetations. In an examination of twenty-six deaf-mutes, Dr. A. F. Haight, of Chicago, found only four free from post-nasal adenoids. Aside from heredity, consanguinity, traumatism and acute infectious diseases, adenoid growths is the next in frequency as an etiological factor in the production of total loss of audition. When adenoids are sufficiently extensive to cause profound impairment of hearing in early life, the conductive and receiving apparatus is affected in such a manner as to lead to deaf-mutism. Even in children three to four years of age, who speak fairly well, the loss of audition is often followed by mutism. In older children not necessarily so.

I think we all agree that the prognosis of aural affection dependent upon the presence of lymphatic growths in the naso-pharyngeal vault is unfavorable, unless the enlargement is slight or moderate, and there is no history of past trouble of serious import, and no positive symptoms of present trouble with that as a cause, there is no demand for immediate operative interference. When the hearing is impaired we should not wait for the probable spontaneous subsidence of the growth and aural affection, but operation should always be done at once.

The question now arises: Should one operate with or without a general anesthetic, and if the former, during primary or profound anesthesia? With all due reverence and respect to the skilled operators of vast experience along this line of work who insist that it is barbarous and altogether impossible to do a complete and satisfactory operation, except under general anesthesia, and to those of my colleages who advocate operation under primary anesthesia, I desire to go on record as directly opposed to their teaching, and to the contrary, practice the modified operation without a general anesthetic, with but few exceptions. The text-books almost without exception advocate the use of chloroform in this operation. Of all anesthetics chloroform is the most dangerous to administer to children suffering from adenoids, on account of the so-called "lymphatic diathesis." The presence of hypertrophied lymphoid tissue in the naso-pharynx is often but a local expression of a general dyscrasia. Occurring during the developing period of life these growths, by obstructing the act of respiration, impair the oxygenation of the blood, and by necessity to a greater or less degree, affect every tissue, every organ of the body, not only the neighboring parts, but the more remote, such as the heart, lungs, kidneys, etc. These patients, then, are in a depressed state of general health, and it has been the observation of some of our most patient investigators to find co-existing with this lymphatic habit, weak heart, impoverished blood, impaired lungs, and little reserve force to resist disease and shock.

Time and clinical experience have proven to me that it is exceedingly difficult under any form of operation to make sure that all the growth is removed, and I doubt if it is possible to remove every vestige of lymphoid tissue, owing to the irregular formation of the vault, and the fact that one is obliged to work in the dark, success in removing the growth depending upon touch rather than sight. The various methods proposed for this operation are well known to the profession. In my hands the following has been most satisfactory: In the soft variety of adenoids in young children, I resort to the compression or crushing method of the diseased tissue. Consequent on these maneuvers, repeated more or less frequently, the tissues become less inflamed, the remnants of tissue are reabsorbed, the function of the glandular tissue is

re-established as well as the circulation in the blood vessels and lymphatics. The ease with which this soft variety of adenoids may be broken up and expelled by the finger wrapped with gauze, is well known, yet there are many operators who persist in doing a so-called radical operation with cutting and curetting instruments. In older children, where the adenoid tissue is principally confined to the fossæ of Rosenmuller and on the lateral walls of the naso-pharynx, I prefer digital manipulation, and regard the operation outside the domain of cutting and curetting instruments on account of the unavoidable danger of injuring vital parts. I never use a general anesthetic in these cases. In the hard or hypertrophic variety there is an increase in the lymphatic structure, with a decided overgrowth in the connective tissue element, making the tumefaction fibrous in its consistency. In these cases, on account of the toughness of the tissue, it is absolutely necessary to employ some kind of a cutting instrument, forceps, curette or rongeur. I use curette only in isolated cases, where the mass is in median line of vault. It is the exception, not the rule, to remove the adenoids in their entirety the first operation; usually I require from one to three sittings, depending upon the amount present and the nervous disposition of the patient to complete the operation. I am in the habit of employing a local anesthetic to the field of operation.

The points worthy of consideration in this method of operating without a general anesthesia are: the little danger of fatality during the operation, the facility with which the work can be performed in the upright position, the abundant time at the operator's disposal, no danger of asphyxiation from blood clot in the trachea, and in case of unusual hemorrhage you have the assistance of the patient, and can stop operating and devote your attention to the bleeding before serious consequences ensue.

I have seen surgeons operate under general anesthesia for adenoids, with the handle of a Goldstein curette grasped in their hand, in the manner in which a stonemason holds his chisel, and scrape in the vault as if he were endeavoring to empty the contents of the subject's cranium through the naso-pharyngeal space, seemingly oblivious of the close proximity of the brain, the spinal cord and accessory cavities, with such brutal force and dangerous haste that I stood amazed —breathless, expecting every moment to see the unfortunate succumb. In the hands of a reckless, hasty surgeon this operation is the most barbarous in the domain of surgery.

The after-treatment I consider an important factor. The parts should be free from the accumulations of secretions, and kept in an aseptic state by frequent spraying. Astringents may be applied with benefit. The general system should be built up by the internal administration of iron, a point few operators consider, and another point upon which I lay special stress is breathing exercises through the nose, with the mouth closed. This should be instituted at once, and carried on systematically for an indefinite period. The patient should be kept under observation, indefinitely, on account of the possibility of a return of the trouble.

Now, as to the auditory results following the removal of post-nasal adenoids. The hearing is found, within a few days, occasionally a few hours, after operation, to be improving, and it continues to improve, as a rule, without any special attention to the ears, and the ultimate result is normal sense of hearing. There are cases in which the final degree of improvement from the operation may not be the best obtainable. What is the cause of this? Is it not possible that it may not be due to what the radical operators regard as an essential of the operation, viz., the thorough removal of the lymphoid tissue? Is it probable that the raw surface left by the too complete operation may leave an area of cicatricial tissue, and adhesive bands between the posterior wall of the pharynx and the Eustachian tubes, causing this degree of impaired hearing? Dr. D. McKeown, in his excellent thesis on this subject, says: "The chief reason for thoroughness has been the desire to avoid the possibility of a return of the adenoids; but may the fear of this tissue not be a groundless one? Presence of lymphoid tissue in the naso-pharynx is the normal condition, and after operation various circumstances are

against reproduction. 1. The devascularization of the naso-pharynx and its neighborhood. 2. The establishment by the physiological channel. 3. The development of the region involved. 4. The antagonistic influence of time on lymphoid structures. 5. The improved general health following operation.

Impairment of hearing from a reproduction of the adenoids is remediable, but impairment of hearing from faulty cicatrization is practically irremediable.

Fortunately, in the majority of cases, the hearing improves immediately after operation unless some previous pathological condition of the middle ears existed long before operative interference. In these cases longer time is required to bring about a satisfactory condition after operation has been performed.

Bryant Building.

[Written for the MEDICAL BRIEF.]

A Case of Congenital Subluxation of the Knee Joint.

BY NORMAN DREISBACH, M. D.,
Professor of Anatomy and Surgical Anatomy in the Medical Department of Hamline University.
Minneapolis, Minn.

While cases of subluxation of knee-joint are not so rare, yet they are not commonly seen, as a search of the medical literature demonstrates. This condition, a backward displacement of the knee, can not be called a dislocation, since it is, in all probability, of congenital origin, and is doubtless caused by the position of the infant in utero. Statistics show that with proper care, the condition yields promptly and successfully, and permanent deformity is very rare in these cases.

About ten days ago I was called to attend an obstetric case, but before I reached the house parturition had occurred. I found the patient, a multipara, in good condition; the labor was completed, and the placenta had been removed by her mother, who was a midwife. I was informed that the day previously the bag of waters had broken, but that there had been no pain during parturition, although all the previous labors had been very severe, requiring instrumental assistance.

After examining the mother and finding everything all right, I directed my attention to the baby, and was shown by the anxious midwife, the grandmother of the child, that one knee was bent in the wrong direction. On examination, I found a subluxation of the congenital type, slight traction with one hand on the thigh and on the tibial portion of the leg sufficed to reduce the dislocation. On relinquishing hold, however, it immediately resumed its former condition. An improvised splint fashioned from pasteboard, padded with cotton, was employed, and removed after twenty-four hours, and a plaster cast substituted. At the present time the little fellow seems to be progressing satisfactorily. In all other respects the child was apparently normal. The circulation was very poor in that leg at first, due, probably, to the pressure of the proximal end of the tibia upon the popliteal vessels; after reduction of the dislocation the color of the foot changed from dark purple to the normal pinkish hue in a short time.

320 Syndicate Arcade.

[Written for the MEDICAL BRIEF.]

Hypodermic Syringes.

BY F. H. LONGLEY, M. D.,
North Platte, Neb.

Hypodermic syringes, as near as I can learn, were first used in Paris in 1855. November, 1866, I bought one of Otto & Reynders, M. F. G., in Cincinnati, Ohio. They were in common use with the advanced and up-to-date physicians and surgeons in the winter of 1866-7 in Cincinnati. I brought mine to Omaha March 1, 1867. You will note the hypodermic syringe made its debut coeval with the birth of our State, and I claim to be the first physician that used a hypodermic syringe in that State. I find I have the wrecks of three syringes. Some ten or twelve years since I bought a hypodermic syringe, aluminum case No. 3, of Parke, Davis & Co. Am still using it with satisfaction to all concerned, and hope to be able to use the "Opsonin" or the bacterial vaccine protoplasm serum soon.

[Written for the MEDICAL BRIEF.]

County Sanitarium for Treatment of Pulmonary Tuberculosis.

BY R. C. MOORE, M. D.,

Professor of Diseases of the Mind in the College of Medicine of the University of Nebraska. Omaha, Neb.

Up to a comparatively recent time the treatment and management of cases of pulmonary tuberculosis have been almost invariably unsatisfactory. Of course, some cases recover without any treatment whatever, as has been demonstrated at *post-mortem* examinations by the finding of cicatrices indicating that abscesses had been present and healed over in the lungs. But since the inauguration of the sanitarium method of treatment the percentage of cures has been greatly augmented. When cases reached the sanitarium in the incipient stage from seventy to seventy-five per cent of recoveries has been reported, while the remaining cases have been greatly benefited. And even when the patient can not remain long enough to be cured, he is at least taught how to take care of himself and to avoid exposing to infection those with whom he is brought in contact.

While theoretically the sanitarium treatment could be followed out at the home of the patient, practically it is impossible. Tubercular patients must absolutely live out of doors in the fresh air, and sanitarium buildings and tents are constructed with this consideration in mind. There is such a feeling among the laity against the exposure of these patients to the inclemency of weather that on the first approach of storm or wind, the windows are closed, and the patients shut up indoors in short order, while in the sanitarium, in spite of storms, the windows are left open. During the winter season one can read in a little journal devoted to sanitarium life out of doors items like the following: "On the morning following a severe snowstorm, workmen had to reach the Rutland wards at five A. M., in order to shovel out the snow." It is impossible, practically, to convince the laity that such exposure was other than detrimental to the patient.

In addition to the foregoing great advantage, the routine life is next in importance as a feature of the sanitarium treatment. The discipline in a well-conducted sanitarium is as strict as that of a military camp. These cases are under the constant surveillance of a competent physician, and every day they are examined, the sputum is examined, there are bacteriological examinations and thorough disinfection of the discharges from the diseased surfaces, and the discharges thoroughly destroyed. Under this care, there is really less danger from infection in a sanitarium than in the streets of our cities.

In those States where the sanitarium method has not been adopted, and where the extra expense is a deterrent factor, there is an inexpensive and practical way of arranging for the care of these patients in connection with the local county hospital.

Some time ago I devised a plan for use in our local hospital, and described same before a meeting of the Medical Society of the Missouri Valley, in September, 1906. And for the benefit of those individuals or committees in counties of this or other States, who may be contemplating the erection of a sanitarium *in the future*, I suggest a careful consideration of this plan, which can be put in operation *now* at such a trifling expense as an annex to the county hospital.

Drawings for this structure were made by Mr. Kimball of this city, an architect who has given special attention to the modern treatment of tuberculosis, and who will be glad to answer any questions regarding this plan.

The structure above referred to may be modified to meet varied conditions. It should be built in easy communication with the kitchen, lighting and heating plants of the hospital. The sides, to the height of four feet, can be constructed of canvas, stucco or brick; from the top of the wall the space of three feet to the plate is covered by wire fly-screen, which, in very stormy weather, can be protected by heavy canvas curtains. The ceiling of the ward is made of wire-screen, and all openings are screened against insects. The heating will be by means of small steam coils placed under each bed, or in

other parts of the ward. The wards are designed for ten patients each, and are separated by the central building, which is divided into suitable toilet, sitting and dining rooms.

Where a less expensive structure than the foregoing is desired, the best substitute is found in the octagonal tent, designed and used by Dr. J. E. White of Colorado Springs. Being octagonal in shape with a high slanting roof (on the principle of an Indian tepee), it stands the storms extremely well. It is built of canvas, but has lately been improved by making the roof of wood. Ventilation is secured by means of an opening at the apex.

McCague Building.

[Written for the MEDICAL BRIEF.]

Congenital Club Foot.

BY GEORGE B. PACKARD, M. D.,

Professor of Orthopedic Surgery in the Denver and Gross Medical College.
Denver, Colo.

When shall we begin treatment in cases of congenital club-foot? While authorities differ somewhat in regard to the time tenotomy should be performed, they are quite unanimous in the opinion that other methods of treatment should be commenced in all cases within a few weeks after birth. When circumstances permit, I usually begin treatment in ten days after birth. Since the object of treatment is to correct the deformity and to retain the foot in its corrected position for a sufficient length of time to preclude the possibility of a relapse, the question of methods is an important one.

I wish to emphasize the great advantage of dividing the operation for overcoming the deformity into two steps, viz., correction of the varus and correction of the equinus. If this method of procedure is adopted, there can be no doubt of the advantage of leaving the tendon-Achilles to steady the heel and act as a counterforce in overcoming the resisting fascia and ligament of the inner side of the foot until the varus is completely overcome, or even converted into a valgus. There is a temptation to attack the equinus before the varus is relieved, and even to attempt the reduction of the two deformities at the same time, with the general result that resistance at the inner side of the foot is not overcome, and we are deceived in regard to flexion of the foot, and the tendency to relapse is greatly increased.

As a rule in these early cases I find the varus can be relieved by mechanical methods alone; but in some cases it may be necessary to divide the plantar fascia, the tendons of the tibialis anticus and posticus, and possibly the astragalo-scaphoid and calcaneo-cuboid ligaments.

One of the simplest and best methods of correcting varus is the repeated application of plaster of paris. Under anesthesia, the foot is grasped firmly, and the varus overcome as much as possible without interfering with the circulation. The plaster of paris sets so quickly that it is necessary to hold the foot in position for only a few minutes. The plaster should extend above the knee, the latter slightly bent to hold it more firmly, and prevent the foot from rolling in the cast. After ten days the cast is removed, and another plaster applied in the same way after the foot has been forced into a still more correct position. Three or four applications are generally sufficient to overcome the varus.

This method every physician has at his command, and no great skill is required in carrying it out.

Another very satisfactory procedure for relieving this part of the deformity is the application of a simple steel support which acts as a lever to throw the foot into position. It can also be worn to retain the foot in position after correction.

A brace I have used with much satisfaction, both in overcoming the varus and as a retention apparatus, is a modification of the Taylor shoe, consisting of a flat steel plate corresponding to the shape of the foot, and at right angles to this rises an inner border, to which is attached an upright, allowing forward motion at the ankle joint. A little higher there is another point allowing lateral motion, which is regulated by a strap attached to the outer border of the foot-plate, and extending to the band which encircles the leg below the knee. After the foot has been properly strapped to the foot-plate,

and the upper end of the upright fastened to the leg above the knee, the outer border of the foot can be raised to any degree by tightening the strap which extends from the foot-plate to the band. As the tissues relax on the inner side of the foot, this strap should be shortened. This constant stretching will soon correct the lateral deformity. This apparatus is simple, and can be made by any instrument maker, and is easily applied. It may be more satisfactory in some cases than the plaster of paris.

The first step of the operation being thoroughly accomplished, the next step is to bring down the heel or to overcome the equinus. In many cases we shall find that the tendo-Achilles has yielded a great deal while correcting the lateral deformity, and it only requires a little more extension by the means already alluded to, in order to complete the operation. If much resistance is offered, it is better to divide the tendon subcutaneously and bring the foot into position at once.

As before stated, there is great danger of relapse in these cases, consequently the after-treatment is very important.

The foot should be held in its corrected position for a sufficient length of time for new facets to form on the bones in their new positions, and become normal. The retention apparatus for maintaining the foot in this position should be worn day and night, and should permit of motion at the ankle joint.

Massage and electricity are useful means of developing the muscles after the deformity has been corrected.

In these cases little time would be gained by performing tenotomy before mechanical treatment has been resorted to, and the disadvantages are apparent. It will be necessary for a child to wear a retaining support for a long time in all events, and if it acts partly as a correcting force we are not consuming any extra time by this apparently slow method.

It is an error to suppose that tenotomy alone will cure club-foot in a few weeks. Cases that are supposed to be cured in this way without additional mechanical treatment being carried out, invariably relapse. I believe, therefore, that a judicious combination of the operative and mechanical treatment is generally preferable.

To sum up: I would say, begin treatment as soon after birth as possible.

Thoroughly overcome the varus before attacking the equinus.

Retain the foot in its corrected position both day and night (without interfering with the normal functions of the foot) for a sufficient length of time to prevent a relapse.

732 Fourteenth Street.

[Written for the MEDICAL BRIEF.]

Some Interesting Medical and Vital Statistics.

BY SAMUEL F. BROTHERS, PH. G., M. D.,
Member of the American Medico-Pharmaceutical League.
Brooklyn, N. Y.

F. T. Andrews[1] (Practical Medical Series, March, 1904) examined the bacteriologic reports of 680 cases of pyosalpinx taken from the literature, and found the following percentages of organisms in his statistics of the etiology of salpingitis:

Sterile, 55 per cent.

Only saprophytes, 6 per cent.

Gonococcus, 22½ per cent.

Staphylococcus and streptococcus, 12 per cent.

Pneumococcus, 2 per cent.

Bacillus coli communis, 2½ per cent.

In 4,470 abdominal sections, tuberculosis of the Fallopian tubes was found 53 times, or in about 1.5 per cent. In 906 reported operations for inflamed uterine adnexa, tuberculosis was found in 4.4 per cent.

Statistics of the Effects of Cervical Repair.—D. H. Craig[2] cites the results in 100 cases of trachelorrhaphy, in which he was able to get replies from the patients.

Eighty-nine per cent complete cure, or great relief from symptoms.

Forty-nine per cent of child-bearing women had future pregnancies.

Out of 16 answers from the accoucheurs in these cases, 14 stated that dilatation of the cervix was very easy. Relaceration occurred in eight cases, but did not occur in seven cases. The percentage of permanently cured cases was 84.

Answers of other specialists put together with his own experience, convinced

Craig that 90 per cent of the cases of cervical carcinoma occur in previously lacerated cervices remaining unrepaired.

Vital statistics of various countries:

The vital statistics of Italy for 1899,[3] published by the Department of Agriculture, Industry and Commerce, for the year 1899:

Population, 31,762,328.

Marriages, 235,665.

Marriage-rate, 7.42 per thousand (couples).

Births, 1,088,558.

Deaths, 703,393.

Death-rate, 22.15 per thousand.

Excess of births over deaths, 385,165.

The greatest number of marriages were celebrated in February and November, and the least in July and August. The highest birth-rate was found in Puglie and Calabrie (38.1 and 39.2), and the lowest in Liguria and Piedmont (28.5 and 29.2). The greatest number of births occurred in February and May, and the least in September and October.

The sexes were in the ratio of 1,000 females to 1,063 males.

The ratio of illegitimate births was 6.14 per cent.

Of multiple births, the ratio of twins in 15,945,243 births—which occurred in 14 years, 1886-1899—was one in 87 births.

Of triplets, one in 6,914 births.

Of quadruplets, one in 759,297 births.

The highest death-rates in 1899 (25.43 and 25.39) occurred in Sardinia and Puglie, and the lowest (19.2 and 19.5) in Venice and Piedmont. The greatest number of deaths occurred in March and December, and the fewest in September and October.

The deaths of infants under one year were 168,244, or 23.9 per cent of the total mortality, as compared with 26.1 per cent for the years 1890-1898.

Vital Statistics of the Jews.—Fishberg[4] concludes that the death-rates of the Jews, at all ages, are relatively and absolutely lower than those of the people among whom they live.

The marriage-rates and birth-rates of the Jews are lower than those of the Christians; they increase more rapidly because they lose fewer children by death. The Jews are less attacked by infectious diseases than their neighbors. Syphilis and alcoholism are comparatively rare among the Jews.

Diabetes is very frequent among the Jews. All the functional neuroses are more frequent among the Jews, while the organic nervous diseases are less so. Insanity is two to five times more common among Jews than among Christians. Blindness, varicose veins and hemorrhoids are very frequent among Jews.

These peculiarities are due to the past history and habits of life of the Jews, and not to racial characteristics.

When the Jew mixes with Christians and adopts their customs, these distinctive characteristics disappear.

Vital Statistics for Germany for 1897.[5]—The infant mortality, as shown by the returns of 1897, exceeded one in five, and showed no tendency to decrease. More than one-third of the deaths of infants under one year were due to "gastroenteritis," while whooping-cough was more fatal than diphtheria, scarlet fever and measles combined. At ages 1 to 15, diphtheria was the main cause of death, though the mortality is declining, particularly in the large towns, owing, probably, to serum treatment.

Accidents killed 5,332 children. No less than one-third of the deaths during the active years of life (15-60) were attributed to various forms of tuberculosis, pulmonary tuberculosis accounting for 82,279. Even in the ages over 60, tuberculosis still occurs in nearly six per cent of the death certificates. The frequency of malignant disease has increased in this section even more than in the ages immediately below. The birth-rate gives an excess of fifteen per thousand over the death-rate.

Vital Statistics of England for the Year 1900.—The General Abstract,[6] or advance sheet, gives the population of England and Wales as 32,247,015; marriages, 257,139 (couples); marriage-rate, 15.9 per 1,000; births, 926,304 (470,784 males and 455,520 females, or in the ratio of 1,033 males to 1,000 females); deaths, 587,459; death-rate, 18.2; death-rate of males, 19.5; of females, 17. The marriage-rate of London was 17.9 persons married; the birth-rate, 29, and the death-rate, 18.6.

Regarding infant mortality, Reid[7] showed that the employment of mothers

increased infant mor-

...s the death-rate

1884	1885
19.33	19 61
9.20	18.63

birth-

tes

...8
17.4
21.9

...m 1860 to
..., from 1861 to

...ns to 1,000 population ...g countries was: Scotland, ...d, 24.1; Denmark, 32.4; Nor-...9; Sweden, 29.4; Austria, 38.9; ...gary, 44.6; Switzerland, 28.8; Nether-...nds, 35.3; Belgium, 31.2; France, 24.8; Spain (1870), 35.4; Italy, 34.27; Germany, 36.9; England and Wales, 28.7.

To sum up, we thus see that Hungary gave the highest birth-rate, with 44.6 births annually per 1,000 population.

While France is said to show the lowest birth-rate, it should be remembered that many of our States, almost as large as France, give a still lower birth-rate.

It would seem, then, that while more males are born than females, nature compensates for this, to a large extent, by causing a larger mortality in males. Notwithstanding the deaths, the general population is steadily increasing, taking our globe as a whole.

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27 Pennsylvania Avenue.

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The Medical Feature of the Treatment of Appendicitis.

MILTON J. LICHTY, PH. B., M. D.,
...sor of Medicine in the College of ...ysicians and Surgeons. ...Cleveland, Ohio.

...my purpose to criticise the ...the surgeon, or to deny that ..., if not most, cases of appendicitis ...e surgical as soon as diagnosis is made. All cases can be classified under three heads:

1. Acute cases, whether mild or severe, in which operation is nearly always safest when in the hands of a skillful surgeon, especially if the operation be done early.

2. Chronic cases, with a history, often obtainable, of a former attack not diagnosed, in which attacks continue to recur, often with increasing severity and frequency.

3. Doubtful cases, where the diagnosis is at once uncertain and difficult.

Under the third class there comes a line of cases in which there are definite symptoms pointing to lesions in other organs, as the rectum, ovary, uterus, stomach, gall-bladder, liver, kidneys, intestines, especially the colon, and even sometimes to lesions of organs not in the abdominal cavity. It is in cases of this kind, where symptoms, sometimes misleading, pointing to disorders in other organs than the appendix, which, after all, may or may not be the seat of the disease, that serious errors may be made, both by the surgeon and the physician. It is no credit to a surgeon to operate upon cases for appendicitis when there is no necessity for it. Such errors do occur, and sometimes they lead to a speedy fatality. Of course, the literature on this sort of error is not voluminous, but many physicians can recall such errors, either in their own practice or the practice of others—errors not usu-

ally published. On the contrary, the discredit is just as great upon either physician or surgeon who overlooks a correct diagnosis, or, who, after making such a diagnosis, allows his patient to pass from a favorable into an unfavorable condition without considering the advisability of operation. Here, then, is a line of cases where strict medical supervision may be necessary for the comfort of the patient, where sometimes long-continued observation is necessary before a case can positively be diagnosed either as appendicitis or a lesion in some other organ. It is in this third class where the medical feature in the treatment of appendicitis is of paramount importance. Under this heading, too, must be mentioned those cases requiring medical treatment while the surgeon is taking care of the surgical part of the case, as well as a considerable number of cases who have successfully passed through an operation, but who fail to regain health subsequently. How often do we see chronic cases, baffling all effort at a proper diagnosis, suddenly develop typical symptoms of a surgical condition. And how often do we hear of and come in contact with patients who say they had appendicitis years ago, had a successful appendectomy, but have never been well since. Too often the operation, in the mind of the patient, is the direct cause of the subsequent ill-health.

The following reported cases illustrate these points:

Case 1.—Mr. S., aged thirty-one, had his appendix removed ten years ago. He was never sick before his attack of appendicitis, and has never been well since. At the time of operation the appendix was removed, and there was general peritonitis, so that his abdomen was packed with gauze. Recovery was tedious. Since then he has been suffering with pains over the cecum, also pain over the left side, in the lumbar region. These pains occur several times a week or month, and are not relieved until his bowels are thoroughly evacuated, or until he has been given a hypodermic of morphia. With the cleansing of the bowel there is always an evacuation of much mucus, and sometimes undigested food. Upon examination, I find he has a dilated stomach, with a hyper-chlorhydra. There is, likewise, a left movable kidney, and there is tenderness over his cecum and gall-bladder. He does not consider the operation the cause of his trouble, but can not understand why he is not well. One can very easily see how a dilated stomach, with hyperacidity, would cause pain over the pyloris, and, possibly, catarrh of the gall-bladder, so also is there excuse for pain over the cecum, and in the left lumbar region, with a history of constipation, colica mucosa, and a left movable kidney. The patient has not been under observation very long. But a corrected diet, though liberal in quantity, together with the use of alkalies, laxatives, massage, and the electric current to the abdomen, have already given him great relief, and he is increasing in weight. The bowels are more regular, and he has been free from pain since taking treatment.

Case 2.—Mr. B., aged twenty-five, has always had fair health until he developed a chronic appendicitis several years ago. His appendix was removed in February, 1906. It was not perforated, and there was no general peritonitis, but the appendix was removed with much difficulty on account of its size, extending from the cecum beneath the colon to the liver. There were many adhesions. The patient made a quick recovery from operation, but after leaving the hospital he was much afflicted with pain in the right iliac region, and distress in the stomach after meals. The patient has a dilated stomach, which extends to or below the umbilicus. There was tenderness over the pyloris, with an enlarged and palpable liver. He has had many attacks of pain in the stomach and in the right lumbar region, as severe as any pains he had before his appendectomy. Some of these attacks were so severe as to require a liberal dose or two of morphia. Pyloric stenosis, with dilatation of the stomach and gall-bladder disease, ulcer, were considered, but finally ruled out with difficulty. After each attack of pain the first few evacuations of the bowels revealed large quantities of green and offensive mucus, mixed with fecal matter and some undigested food. On account of the distance to his home it was never my opportunity to see this patient in one of his attacks until several months ago. I always saw him some time

after the attack, after the catharsis was already begun, or after he had received a hypodermic of morphia. During his most recent attack, however, which occurred in the evening, I could easily outline a soft, doughy mass in the right colon, or cecum, as big as a man's fist, about which was most of his pain. Had I not known that his appendix was removed I would have considered operative measures. But he was given a hypodermic of morphia, a dose of castor oil, and large enemas of olive oil. The next morning he passed an unusual quantity of fecal matter and mucus. I feel that the patient had a dyspepsia with hyperacidity (which is not the less easy to treat on account of his dilated stomach), as well as mucous colitis (mucus is often found in the stools), and probably some bands of adhesions about his ileo-cecal region, which may occasionally cause a fecal obstruction. He has been taking much olive oil recently, castor oil occasionally, rectal flushes, followed with olive oil. This, with a more or less continuous administration of alkalies, as well as massage, and the interrupted electric current to the abdomen, has given him much relief. He has a liberal diet, and has gained twelve to fifteen pounds in weight, and though the patient is not yet well, I see that he can not get along without medical supervision.

Case 3.—Miss J., aged nine, had acute appendicitis, for which operation was done in May, 1906. The appendix was found perforated; general peritonitis was present, and many apparent tubercles upon the intestines. The wound was packed with gauze. The patient seemed to improve nicely for ten days, when suddenly symptoms of intestinal obstruction developed. The bowels were constipated or obstructed, and there was nausea and vomiting. This condition lasted six days. During that time free fluid seemed to accumulate in the abdomen. The wound was dry, the tissues seemed dead. During the entire week the patient received no food or water by the mouth, and but little through the rectum. A more desperate post-operative condition could hardly be seen or imagined. A second operation was out of the question. The Alonzo Clarke, or opium treatment, was consequently carried out, and the respirations kept as low as twelve to fifteen a minute. At the end of seven days the bowels moved voluntarily, and the patient began to convalesce. The convalescence was tedious, but the patient recovered. To me it seems that the post-operative treatment was almost as essential as the operation itself.

Case 4.—Mr. T., aged thirty-seven, was first seen in January, 1906. He gave a typical history of dyspepsia, in which were some suggestions of former attacks of appendicitis, or gall-stone colics. Physical examination showed a dilated stomach, with hypopepsia. The patient weighed only one hundred and twenty-two pounds, and is probably affected with a lesion at both apices of the lungs. He was put upon vigorous treatment and a careful diet. Five weeks after examination he developed an apparent attack of acute gastritis, with nausea and vomiting. The bowels were costive, and there was much tenderness over the gall-bladder, but no tenderness over the appendix. The next morning the patient seemed better. The temperature and pulse were normal, and there remained tenderness over the gall-bladder, while the lower part of the abdomen was soft and entirely free from pain. At noon the patient thought of leaving his bed. At five P. M. (less than twenty-four hours after the onset of the attack) his pain suddenly shifted to the lower abdomen. The abdomen became distended and rigid. Perforation of some abdominal organ seemed sure, but one could hardly say with certainty that the perforation might not have been in gall-bladder, stomach, or duodenum. However, operation was done in a few hours. A perforated or gangrenous appendix, adherent to the bladder, was quickly removed. The abdomen was drained through three openings, and the patient was returned to bed in a desperate and critical condition. To our surprise, however, he recovered from the operation, and is today in fair health. Convalescence was tedious. The patient has often remarked that he believed the careful preliminary and subsequent medical treatment, as well as the close observation during his attack, had much to do with carrying him successfully through his very critical condition.

Case 5.—Mr. H., aged thirty-three. He was afflicted with mucous colitis for some years, and came under my observation in June, 1902. Diarrhea of mucus stools was very annoying. Occasionally there was constipation. There were no attacks of acute appendicitis. Some of his attacks of diarrhea, during which there was an evacuation of much mucus, were very painful, but there was no localized tenderness, nor was there any alteration in temperature and pulse from the normal. The patient was under heavy official pressure, and seemed neurotic. During a temporary residence in Akron, in 1903, he had several attacks of cramps in the abdomen of more than usual severity. In the midst of one of these the patient left his office to consult me at my office in Cleveland. I then found tenderness over the appendix. All other signs of appendicitis were absent. A surgeon was consulted, and exploratory incision advised. At operation a long catarrhal appendix was removed. There was considerable induration of all the layers in the anatomy of the appendix. There were few or no adhesions. It was not a dangerous-looking appendix, though it had a safer appearance outside of the body than in. My first impression was that of erroneous diagnosis, and that I had treated a case of appendicitis for two years, thinking all the time it was mucous colitis. Three or four months after operation, though, the patient had a return of some of his former attacks of colica mucosa, but not so severe as those prior to operation. Medical treatment was again begun. It was continued methodically for a considerable time, and the patient today considers himself quite well. But I shall possibly never know whether the colitis was the cause or the result of his appendicitis, though it does seem to me that the medical treatment in this case, both before and after operation, was of great benefit to the patient.

Possibly a better name for this paper would be the preliminary and subsequent medical treatment in association with the operation for appendicitis. I believe there are few cases where medical treatment during a pronounced attack of appendicitis is justifiable or safe. And I never feel safe or comfortable in the management of an attack of appendicitis unless I have a thoroughly competent surgeon of my own selection at my side. However, I also believe that there is a medical feature in many of these cases before, during and after the operative treatment, which, if neglected, will be detrimental to the patient.

1803 East Eighty-Second Street.

[Written for the MEDICAL BRIEF.]

A Report of Four Interesting Cases of Stone in the Bladder.

BY WALTER D. GREENE, M. D.,

Clinical Professor of Genito-Urinary Diseases in the University of Buffalo.
Buffalo, N. Y.

The distinctive features of the first three cases are the foreign bodies in the bladder causing stone. The fourth case is somewhat unusual, owing to the great size of the stone removed from the bladder.

Case 1.—S. K., aged fifty-one; widower, consulted me in April, 1907, for pain in the region of the bladder; increased on urination. Temperature and pulse normal. Appetite poor; lost much flesh. Examination revealed the presence of stone in the bladder. Operated by the peritoneal route, and a stone extracted about the size and shape of a normal finger. The stone was phosphatic, and the nucleus was chewing gum.

Case 2.—M. G., aged seventeen; school girl, consulted me in October, 1900. Found patient extremely emaciated; pulse one hundred and twenty-four, temperature 102° F. Complained of excessive pain on urination. Urine contained much pus, and small quantities of blood. Sound revealed the presence of stone in the bladder. Two days later operation was done through the vagina, and a large phosphatic stone extracted; hairpin as nucleus. Girl made good recovery, gaining thirty pounds in flesh in three months.

Case 3.—A. B., aged thirty-six; unmarried; housekeeper by occupation; consulted me in February, 1900, for pain on urination. Pulse and temperature normal. Sound revealed small stone in bladder. Examination of urine revealed nothing

abnormal. The urethra was dilated and stone removed in that manner. Under an anesthetic three stones were removed. Examination proved them to be pebbles picked up from the lake shore. On being questioned, patient confessed to this fact.

Case 4.—G. S., aged thirty-two; laborer, born in the United States; German parents; habits not all that could be desired; drank from ten to twenty glasses of beer daily. Consulted me in January, 1898, complaining of pain in the hypogastric region; much pain on urinating and constant desire to urinate. Temperature 102.4° F., pulse one hundred and twenty; feeble.

Passage of sound revealed the presence of a large stone in the bladder, filling the entire cavity. His wife was told that he would soon die from septic infection unless operated upon, and the operation would probably cause his death. Operated next day by suprapubic method, and extracted a calcareous stone measuring eight and three-eighths inches in circumference. Patient died six hours after operation. The stone was cut in two pieces, and found to be phosphatic, with oxylate of lime as a nucleus.

1: Jersey Street.

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Is the Treatment of Consumption by Garlic, Onions, or Other Vegetable Juices, Scientific?

BY ALBERT S. ASHMEAD, M. D.,

Director of a Tent Camp for Consumptives in the Pocono Mountains of Pennsylvania.
New York City.

It is forty years ago this coming winter that there lived on a mountain top—or very near the top—a consumptive in Nevada, in a cabin, one plank between him and the weather; the planks were not jointed—simply lath-battened; the snow would drift in, and on arising in the morning the patient was often obliged to toss the snow off the bed-covering onto the floor, then dress, and with broom or shovel, or both, shove the snow back into the cabin, in order to open the door, and then shovel it all out into the outer air. Then, with pail in one hand and ax in the other, he would travel down hill about four hundred feet in snow knee-high, chop open the spring and bring back a pail of water.

At times the temperature was so low that the pail of water, sitting inside of the cabin, near the door, it is true, but within three feet of a stove in which was a roaring wood fire, at three o'clock in the afternoon, would freeze from the bottom and sides toward the middle.

The mules from the mine (the Chollar-Potosi), on their way to water, passing the cabin, would poke their noses against the glass of the window, knowing that there must be warmer conditions inside.

That weather was some cold. I might mention, parenthetically, that this patient hardened his heart against the mules, and not one of them ever got in.

Several times he has stood in snow nearly or quite three feet deep at his cabin's door, and seen the stage coach below in the valley on its way east with the mail and passengers, traveling on the dry sage-brush desert plain. Under these conditions of life this man recovered his health, and by continuing the same lines of regimen he learned there, he has succeeded in living out the allotted span of man.

At that early date, long before our boasting science had told us that outdoor life was conducive to recovery from the greatest plague of our present day, this layman learned its lessons without knowledge of how it was done. I have had many conversations with this gentleman of means, and extracted many answers from him by questions which I have propounded as to his method of accomplishment, the good result; they resolve themselves into the simple fact that high, *cold* air, dry as dry can be, was the important factor. "Jerked meat" diet was another element in the cure.

Allow me to observe here that the idea that garlic, or any other of the species of *genus Allium*, is preventive, or curative for tuberculosis, no matter whether mixed or not with other juices of raw vegetables, and no matter what the experimentation of Cavazanni (*Lancet*, January 9, 1904,) on guinea pigs may show, is nonsense. Let me prove this:

According to investigations I have made relative to pre-Columbian tubercu-

losis in the Andes Mountains, twelve to eighteen thousand feet, where the air is intensely cold, where garlic is a necessary article of food to prevent the disease known as "soroche," a result of effects of high altitude, causing bleeding at the mouth, nose and ears, with vomiting and difficulty of breathing, the sufferer from soroche must return at once to a lower altitude or die, unless he has with him a supply of garlic, and eats thereof. Should he be an old Quechuan or Aymaran Indian, used to those Andean heights, with enormous racial development of chest, with short arms and legs, and a striking difference from us, in proportionate relations of those parts, due to the high altitude and rare air which have been acting through the preceding generations and ages of his evolution, to prepare him for these very conditions of life, and by a natural acquirement of general varicose condition of all his surface veins, he will escape soroche. Those who are not thus protected suffer more or less from the disease. Indians of very large development of chest do not suffer at all from "puna" or "soroche." This disease is a kind of inflammation of the lungs, brought on by the overexertion necessary at a mountain's great height. "Puna" (soroche) is brought on by working the normal-sized lungs at a vastly greater rate than ordinarily is necessary, in consequence of the very attenuated state of the atmosphere, and the deoxidation of the blood as a result. Onions and garlic are the universal remedy and preventive in man and beast in Andean regions, of this condition, in those who have not the enormous lung expansion necessary to resist its consequences. Tschudi considered that the first effects of this highly attenuated air commenced at twelve thousand six hundred feet elevation. Cats can not live at all at this elevation. The Aymaran and Quechuan Indians counteract the effects of high altitude on their blood (deoxidation) by eating ashes (an alkali), with coca leaves. This diet distends their stomachs with gases and prevents soroche or deoxidation of the red cells. A systemic vacuum results from the pressure of the intensely rarefied air upon the surface of the body. This is nothing but a diminution of oxygen tension. Chacoma, a native herb which stimulates the nerves of respiratory function, is also used, but lower down the mountains, Dr. Sarmiento claims that it has the same purpose as the garlic higher up. Now what is the condition of the air at altitudes where puna (soroche, bootie, parano), all names of the same affection, occurs? The air is very dry, on account of the altitude—at the point where the hygrometer goes back five degrees, it is four thousand meters high. This makes the skin of a person, when he has passed the three thousand meter stage, stretched and chafed. It sheds little scales. General uneasiness of respiration now results—the breathing becomes quickened, until by reason of elimination of all the vital functions, vertigo appears, and *want* of oxidation of the blood results.

Tuberculosis (consumption) was pre-Columbian in Bolivia, both in the Aymaran and Incan Indians. I have made a thorough study, for many years, of pre-Columbian diseases in America, and my articles on these subjects may be found published in the "*Zeitschrift für Ethnologie*," of the Berlin Anthropological Society, and "*The Journal of American Anthropology*," also in the American medical journals.

Uta (skin tuberculosis) is found represented on the grave potteries unearthed with Ancon and other mummies of old Peru, from Lake Titicaca, where Professor A. F. Bandelier, of our American Museum of Natural History, is working, and also in Chimbote. These little anthropomorphous clay bottles show on their represented human faces the mutilating results of this disease—noses and upper lips eaten away. Some idols of the Chibchas of South America show even the insect (a bug) on the chin of the vase, evidently inoculating the germ of this disease.

Dr. Ugaz, the Peruvian specialist of uta, says that tuberculosis-scrofuloderma of ancient Peru and modern tuberculosis (consumption) are identical, and that the presence of Koch's bacillus in both diseases proves the claim, put forth by myself and others, of their unity. Experimental inoculation with this Peruvian scrofulous material, called there the "evil incarnation," has resulted in the tubercu-

lation of the animal after a few weeks, and the presence of the bacillus in the strumous glands confirms the important doctrine and proclaims the identity of tuberculosis (consumption) and the uta of Bolivia and Peru. The inoculation of consumption in old Bolivia and Peru occurred through the intermediary of fleas, flies, mosquitoes, bugs, spiders and butterflies. The insects carried the germs from dead birds, especially parrots of the Andes Mountains, which are especially subject to tuberculosis. Aviary tuberculosis was thus the origin of human tuberculosis in pre-Columbian America.

Today, according to Dr. Ugaz, lung tuberculosis appears in those Indians of the Bolivian Andes who are affected with skin tuberculosis, which attacks primarily the face, hands, feet and other uncovered parts of the body. Auscultation of the lungs of such Indians shows obscuration of the lungs, crackling and rough respiration, or forced expiration below the clavicle, and dullness at the base of lungs. Thus, without any doubt, is proved that systemic infection can result from the original inoculation of the germ.

The germ introduced in the skin, finally infects the system, the lungs, by lymphatic transference.

In spite of persistent garlic-eating, or its equivalent effect naturally acquired, of those Andean Indians for many centuries, in spite of the climatic faction, deoxidation of blood corpuscles by dry, rarefied, cold air, applied for many generations, until their lung expansion had grown excessive enough to withstand the vacuum factoring of very high altitude, which produces in those not thus generationally acclimatized the disease called soroche; by the presence of insects carrying Koch's bacillus perpetually to the skin of those Indians, especially mosquitoes, four hundred species of which are known all over the world, and whose geographic distribution extends from the tropics to the polar circle, whose vertical range is known to be thirteen thousand feet, for they are found in the Himalayan range at that height, with an antiquity running back to the Perbeckian period we find the presence of lupus. We see, in spite of the garlic, and in spite of those natural factors curative of tuberculosis, that tuberculosis has not been extinguished.

Some experiments made by Mr. Mosso on the top of Monte Rosa, indicate that the difficulty in breathing caused by high altitude is due to lack of carbonic dioxide rather than oxygen, which causes the disagreeable symptoms called soroche. Carbon dioxide is one of the normal excretions of the lungs, and its presence in large quantity in the normal atmosphere indicate that the latter is unsuitable for breathing. Professor Mosso found that when at sea-level the barometric pressure was reduced two-thirds (that is, to five pounds per square inch, instead of fifteen), and the proportion of oxygen was increased so that its partial pressure resembled that of ordinary air; the symptom produced by high altitudes, difficulty of breathing, etc., occurred with violence. On the other hand, a mixture of oxygen and carbon dioxide, the breathing of which, in Turin, caused giddiness and nausea, when respired on the top of Monte Rosa, was distinctly agreeable, and produced a feeling of well-being and happiness.

Analysis of the blood suggests that an elimination of the proportion of carbon dioxide, caused by the low pressure, is the cause of "mountain sickness."

Another interesting result of Dr. Mosso's experiments was the discovery that when alcohol is drunk at high altitude, it fails altogether to produce its usual inebriating effects. There is no indication of either excitement or intoxication, and it appears that at such a height the nerve cells are no longer responsive to alcoholic stimulus.

At an elevation of two thousand feet (quite low) on the Pocono, at my tent camp, I have noted that water is very slow in boiling. It required a much longer time for the result at 212° F., than at sea-level. The people there, as everywhere else on a mountain height, crave enormous amounts of starchy food, in place of meat, excepting in the winter time. Every adult eats ten to twelve ordinary-sized white potatoes, and the enormous supply of ten or twelve slices of a large loaf of bread and buckwheat cakes at a meal. This starch-eater has a natural resistance to consumption. In a high place,

the too rapid hematization (deoxidation) is very abundant, for as soon as a person arrives from sea-level, one who is not used to the altitude, and who has not used much starch in his regular food, the urine will become very high-colored, and remain so for a long time, unless he changes to the starch diet. There is more hematin made and more deoxidation ensues than the system requires, or the real blood cells are stripped of its super-deoxidation of red cells. Atmospheric precipitation of a high elevation is very low on the Pocono; less than three inches. The winds are usually extremely dry, being nearly always from the west or northwest. The temperature there during summer ranges from 35° to 65° F., in winter zero to 30° F. below.

Such a climate is very antagonistic to consumption germs. The moderate cold throughout the year is an important factor. Exposure to this mountain air, for even a short time, obliterates fever, and by breathing the atmosphere, the sputa masses grow smaller. They dry out, and fewer are cast off, day by day, until finally there is none. The body weight increases forty or fifty pounds in from two to four months. The ruddy hue of health gradually returns, taking the place of the blanched cheeks. Apathy is replaced by mental alertness, and the cure of consumption occurs in eighty-nine per cent of cases.

This curing of consumption, by these facts would seem to be due not to anything else but improvement and nutritional metabolism, a rebuilding of the natural resistance to the onslaught of the germ in the wounded lung area. Non-occurrence of renewal of disease by the patient's reinoculation of himself (auto-inoculation), through faulty chyle or mesenteric gland deficiency, or by inoculation from other patients, are also elements in rapidity of the healing. Tuberculosis is incurable, if it is ever so, simply because patients constantly reinoculate themselves or each other. If we can stop this, then every patient might get well in the absence of a vast lung area involvement. Long submission to the climatic factors of a high altitude, other things being considered necessary to the cure, proteid greatly improved that he wishes to re-intercurrent affections, will obtain recovery in almost all cases, even with diminished lung function; the tissues that were lost, of course, can never be put back.

Garlic, therefore, which antagonizes the natural effects of altitudinal treatment in consumption, will prevent rapidity of cure by interfering with the metabolistic changes in the blood most favorable to the cure. Garlic prevents super-deoxidation of blood, and increased eliminating of carbon dioxide due to excessive starch diet, to which all mountaineers are addicted, even to the extent of becoming goitrous.

The following cases of cured consumption are verified by facts and of long standing. I have a patient cured of consumption by mere pure proteid feeding at a moderate elevation, independent of mountain air. He is six feet tall, large and broad, heavy, strong man.

Twenty years ago he weighed but one hundred and ten pounds. His occupation had been an engineer; stationary engineer —indoors. No appetite at that time; thin. Diagnosis: Consumption. He consulted Dr. Loomis (the elder), who told him he should go immediately to the region from which he came—Saugerties—and that he might live a year, probably no longer. He did not see his way to live without work; no income. He resigned his position and opened an oyster saloon, keeping outdoors as much as possible. He began eating raw oysters, when hungry; four or five at a time, each time drinking a glass of new ale. That was about the extent of his diet. The ale "eased his throat." After twelve or fifteen months he weighed about two hundred pounds. He resumed his occupation of engineer, and is now janitor and engineer of a prominent public school in New York City.

I have also a patient cured by proteids and outdoor sea-level life, employed by Bernheimer & Cooke, distillers. Last winter, he having consumption, the firm sent him to Spokane Falls to represent them there. He said to his friends who accompanied him to the Grand Central Depot, in this city, on the occasion of his departure that he might as well die there as to die here. He drank ale. He is now so greatly improved that he wishes to re-

turn, and would like the firm to find a place in the Adirondacks—hotel or otherwise—to represent them there.

A physician (also a consumptive) is his frequent companion there, taking note of his lung condition continuously, and has advised him to remain until spring. This patient has a brother here who also was, some years ago, suffering from consumption. Living down-town, this brother began to be outdoors as much as possible. I have seen him standing under an awning on the sidewalk at midnight in high winds and fast-falling snow. He has become fat. I have no further record of his case. As to the best ale for such patients, for both of them made their diet mainly ale and oysters, that is important, for too many brewers have become "chemists" for brewing purposes. Care must be taken in the selection. In England, about a year ago, there was much uproar and protest in the daily journals over disclosures of brewers' methods in "the best known brands of ale;" no names stated. *Arsenic was used.* The poisonous effects of this and other drugs used evidently by an error on the part of the compounding brewmaster, caused investigation and discovery. The undue proportion found present, however, *might be good for consumptives.* Certainly arsenic would not be a bad combination with new ale a diastasic or enzymic for a consumptive's nutrition.

In the camp treatment of patients in the Pocono Mountains of Pennsylvania, I used meat, raw. I do not know whether it is curative. But I can speak from professional experience of the *instant* assimilibility of what is known as "scalloped beef." Some years ago I gave the Salisbury treatment for obesity, a most effective but irrational course: Hot water and beef, and nothing else. In three weeks I had reduced a certain patient from two hundred and one pounds to one hundred and seventy-one pounds. But his stomach was paralyzed; seemed to be in a shriveled state, as become one's finger-ends when immersed too long or too frequently in hot water. Even water was distressful to it. This "treatment" provides for such a contingency by "scalloped beef," as it was called. I gave then this "scalloped beef," and in three days my patient, so badly damaged, was on full and normal diet, to which he afterwards adhered.

Here is the recipe, as made in the Pocono camp:

1. *Scalloped Beef*—Take a piece of the upper part of the round of beef about the size, superficially, of the hand.

2. Denude this of all fat and sinew, so that nothing remains but the red flesh.

3. Take a somewhat heavy knife, and with its edge tap the meat lightly, not cutting it; simply to macerate it. Do this at half a dozen different angles.

4. There will be produced a fine, fuzzy surface, which is to be collected by scraping it off with the edge of the knife, always being careful not to cut or incise the flesh, or tear it.

5. Transfer this collected fuzz, and repeat the tapping process until as much is gathered as is desirable for the meal.

6. Put it in a pan of *cold* water, and place it over a fire.

7. *Keep stirring constantly;* never losing sight of it for so much as half a minute.

8. The instant that it turns gray, take it off the fire. A moment too long—a moment after it becomes gray—it will curl and become useless.

9. Drain, season with salt to taste. I believe this to be the quickest digestible nutriment on the face of the earth.

The first teaspoonful will be felt by the patient to be immediately grasped by the eager but nigh helpless function.

Of course, in my shriveled stomach or obesity case there was no systemic weakness. I think in consumption the milk and eggs given at the same time should be well shaken, as a barkeeper prepares a milk punch. The milk thus becomes ærated for the consumptive's weak stomach, and for most patients is much more palatable.

In the case of the "scalloped beef," it is the beef that the patients eat, not the juice. The effect upon them all seemed, as I interpreted it, thus: The beef being thoroughly and only heated (possibly a bit softened), was directly assimilable, and while not in the least devitalized, was not cold and raw, nor did it possibly retard the weakened digestion faculty. This view, I

remember well, presented itself instantly to me when I had first used it on the patients. It could not have been plainer had their stomachs talked.

50 Cathedral Parkway.

[Written for the MEDICAL BRIEF.]

Practical Disinfection.

BY HENRY E. HANDERSON, A. M., M. D.,
Cleveland, Ohio.

The popular idea of disinfection is to take a few spoonfuls of some disinfecting agent and add to the material to be disinfected, and the thing is done. As a matter of fact, disinfection is a subject which requires considerable care and experience. The most glaring fault of the majority is the tendency to use too little of the disinfectant.

Disinfection, of course, means, as we understand pathology nowadays, the destruction of germs. A disinfectant is a germicide. There are various kinds of germs, some beneficent, some malevolent, some more dangerous, and some less, and for that reason there must be a choice of disinfectants. What will disinfect in chicken-pox will not, necessarily, answer in small-pox.

Perhaps the best guide to disinfection is the character of the germs. Some germs are propagated by spores, others by division. The former are very tenacious of life, and when we have this sort of germ to deal with we must use considerably more powerful disinfectants than in those which propagate themselves by division.

Bearing that fact in mind, the subject of disinfection is very simple. There are three or four disinfectants that we may use with perfect certainty that they will destroy *any* germs. Therefore, these are best for general use. It is not expected that the average man will know the character of the germs to be destroyed.

In the first place, one of the best disinfectants, always obtainable, is boiling water. Steam, an equally good disinfectant, is not always available. To disinfect the discharges in typhoid fever it is necessary only to use *enough* boiling water, when the disinfection will be just as certain as can be obtained by any disinfectant you can use. But the temperature of the water must be raised to the boiling point. In the use of boiling water we have a disinfectant that can be obtained anywhere; there are no poisons to be handled; and it can be used with perfect safety for even the most resistant germs.

Next to this comes, perhaps, bichloride of mercury, commonly called corrosive sublimate. In a solution of one to one thousand or one to five hundred, we have a perfectly reliable germicide, if sufficient is used. The precaution should be taken to use a sufficient quantity of this disinfectant, particularly for infectious material containing a considerable amount of albumin, since bichloride unites with the albumin and part of it is rendered inert, so that in disinfecting stools you must use a large quantity. If you err on the side of using more than is necessary, no harm is done, and the bichloride is not expensive.

Next in importance is chlorinated lime. That also is a valuable disinfectant and reliable if used in a strong enough solution, six ounces to the gallon of water. The chief objection to its use is its odor, but for the disinfection of sinks, water closets and places of that sort it is very useful.

When we come to the more modern disinfectants, they are legion, and many of them are very useful in cases of minor importance, like measles, chicken-pox, etc.

In the less troublesome diseases we have the old and popular carbolic acid, one part to twenty, but it can not be relied upon to destroy the more resistant germs.

For the disinfection of rooms, we have sulphur, brimstone, formaldehyde, etc. If properly used these answer for the destruction of the less virulent germs. Of sulphur or brimstone we must use not less than three pounds to one thousand cubic feet of space, taking great pains, of course, to see that all crevices in the room are filled up, keyholes plugged, fire-places closed, and registers covered, etc., in fact, make the room to be disinfected as nearly air-tight as possible. Care must be taken that all the furnishings of the room be properly exposed to the fumes. After using both these disinfectants the room should be

left closed for from twelve to twenty-four hours. After this time the room is thrown open, and the air allowed to circulate as freely as possible.

None of these disinfectants will penetrate a mattress satisfactorily, and it is doubtful if a bed can be successfully disinfected, except, perhaps, by steam.

1924 Sixty-Sixth Street.

[Written for the MEDICAL BRIEF.]

Biblical Criticism.

BY R. C. CAVE.

St. Louis, Mo.

Many readers of the BRIEF are old enough to remember when criticism of the Bible was supposed to be an almost unpardonable sin. The Bible, from cover to cover, was believed to be the divinely inspired and infallible word of God; and men were told that everything written therein, whether it seemed to them reasonable or unreasonaable, true or false, good or bad, must be accepted by them with unquestioning faith. Whoever dared to doubt the literal truth of the temptation of Eve by the serpent, the speaking of Balaam's ass, the swallowing of Jonah by the whale, and other such stories, was supposed to be denying God, and arraying his puny reason against the Most High. But the superstitious worship of the Bible, which raised it above criticism, is largely a thing of the past. The most intelligent and scholarly men of our time, instead of regarding it as the infallible Word of God which must be unquestioningly believed, are boldly questioning its authenticity and credibility. This questioning is not that of irreverence, nor is it confined to men out of the church. Enlightened ministers of the gospel, as well as learned seekers for truth, who have no church affiliations, are bringing to bear upon the Bible the searchlight of the most rigid criticism, to determine its authorship, character and value. The church of today, through its most scholarly and influential representatives, concedes the legitimacy of subjecting the Bible to the same criticism to which we subject other books, and accepting or rejecting the conclusions of that criticism as they may commend themselves to our judgment.

In thus conceding that it may be criticised as we criticise other books, the church logically surrenders the old claim that the Bible gives an absolutely authoritative rule of faith and practice. It can no longer be said that any doctrine must be implicitly believed because the Bible teaches it; for it is admitted that we may legitimately question the authenticity and credibility of the Bible itself. The church can no longer appeal to what was said by the writers of the Bible as an authoritative standard to which we must conform our faith and conduct; for it is conceded that critical investigation must decide who those writers were, what they said, and whether they are worthy of credence. To admit man's right to criticise the Bible, and to accept or reject the conclusions of such criticism as they may seem true or false to him, is to admit the right of appeal from the decision of the book to the decision of reason. It is, therefore, to deny that the book is a final authority; for a final authority is that from which there can be no appeal—that whose decisions must be accepted under any and all circumstances. Hence, in conceding the legitimacy of criticism to ascertain the truth about the Bible, the church virtually concedes that the Bible can no longer have its old-time right to command, and that the authoritative basis of traditional theology is gone. Men may still believe the doctrines of traditional theology, if those doctrines seem reasonable to them, just as they may believe the speculations of Greek or Hindoo philosophers that seem to them reasonable; but they can no longer claim to hold these theological dogmas by divine authority—they can no longer teach their theological creed as a "thus saith the Lord," to disbelieve which is to disbelieve God and deserve eternal damnation.

But when it is admitted that the Bible is not a divinely inspired and infallible revelation of truth, it does not follow that it must be cast aside as altogether worthless. We do not regard other books as absolutely authoritative, or as altogether free from errors; yet we use them to get whatever of truth and helpfulness they

can give us. On the same principle, even though we can not accept the Bible as an absolute authority, we should not discard it altogether; but, wisely using our reason to discern between the truth and falsehood in it, we should hold fast to all its teaching that commends itself to our judgment as true and beautiful and good. And regarding the Bible in this rational way, using reason and conscience to distinguish between the good and bad in it, instead of holding them in slavish submission to it, we will find it more helpful than ever before. We will find that all of the Bible which is in accord with the divine spirit, and which helps to form the truest life and the noblest manhood, will remain to us with increased clearness and certainty and character-molding power, because freed from what our reason and moral judgment can not approve.

[Written for the MEDICAL BRIEF.]

Fascia of the Pelvic Floor—Perineal Fascia.

BY BYRON ROBINSON, B. S., M. D.,
Chicago, Ill.

(Continued from page 863.)

The vaginal portion of the levator ani fascial proximal is endowed with considerable strength and it becomes blended with and is lost on the vaginal wall. The rectal portion of the levator ani fascia superior passes to the rectal wall, becoming continuous with the fibers and blending with it. There is a strong fillet passing between the rectal and vaginal canal.

The rectal portion of this fascia which passes to the rectal wall, has been termed the ligament of the rectum. This fascia forms a strong support to the muscular wall of the rectum.

It is not an argument very rich in facts to say that the perineal body is to completely occupy the space in that region. It serves as an attachment for one end of the levator ani muscle. A subject which I have not found in text-books is that in many parts the fascia of the pelvis consists of many distinctly defined layers which can be cleaved from each other. For example, the fascia over the coccygeal muscle may be cleaved in several layers and the same may be said, but to such a degree, of the levator ani proximal. Several thin, transparent planes of fascia may be cleaved from the obturator fascia proximal. Even the levator ani fascia distal, which is very thin and compact, may be cleaved into two or more planes. The obturator fascia distal is a very powerful fibrous plane of fascia and may be cleaved on each side into thin planes, but the central plane is a thick, powerful, individual, somewhat coarse fibrous membrane. The powerful obturator fascia distal is cleaved split, for the transmission of the pubic vessels and nerve. The canal formed by the separation is known as Alcock's canal. The several fibrous membranous planes of some of the fascia in the pelvis endow it with enhanced strength and utility. One plane may become lacerated, tear without the other practically being affected. Multiple cleavage planes are characteristic of fascia in other localities, and combined are more capable of resisting trauma than a single plane.

The coccygeal muscle arises from the spine of the ischium and lesser sacrosciatic ligament, becoming inserted into the side of the coccyx and two lower sacral vertebræ. It is a flat musculotendinous angular plane, aiding to close the posterior pelvic exit. Its ventral border is in contact with the distal border of the levator ani muscle of which it is practically a continuation backward and covered by the same fascia, viz., the levator ani fascia superior. The posterior border bounds the anterior margin of the great sacrosciatic foramen. The lesser sacrosciatic ligament, which is formed by a degeneration of the superficial muscular fibers of the coccygeus, takes the place of the continuation of the levator ani fascia inferior. The coccygeus muscle is fading from existence, belonging originally to a large-tailed animal. The origin and insertion of the coccygeus muscle and lesser sacrosciatic ligament are identical. They are so strong that practically they never yield so as to be involved in colpoperineorrhaphy. However, the coccygeus muscle is described in order to show that its fascia should be named the coccygeal fascia, which can not admit of confusion.

The distal surface of the coccygeus muscle is doubly strengthened, not only by the lesser sacrosciatic ligament, but by the proximal surface of the great sciatic ligament which represents the proximal tendon of the long head of the bicep femoris. The tendon of the long head of the biceps formed an attachment at the tubercosity of the ischium. The coccygeus fascia covers the coccygeus muscle and has an area of about three and one-half square inches on each side of the median line of the pelvis, a combined area of seven square inches.

The pyriformis muscle arises from the lateral portions of the second, third and fourth pieces of the sacrum from the distal border of the great sacrosciatic notch and from the great sacrosciatic ligament. It passes from the pelvis through the great sacrosciatic foramen, becoming inserted into the proximal border of the great trochanter. It is the most dorsal muscle which aids in closing the pelvic outlet. It serves as a bed on which the sacral nerves may rest. It is covered by the pyriformis fascia, which is a continuation of the obturator fascia proximalward and the coccygeus fascia ventralward. After leaving the obturator and the coccygeus fascia it rapidly diminishes into a transparent thin fibrous membrane. It is perforated by the internal iliac vessels which leave the pelvis by the great sciatic foramen. The pyriformis fascia is attached to the surface of the sacrum internal to the origin of the pyriformis muscle from the dorsal border of the coccygeus muscle to the ileopectineal line, which passes along the border of the wing of the sacrum to the sacro-iliac joint and finally it is attached to the proximal margin of the great sacrosciatic foramen from the ischial spine to the sacroiliac point. The pyriformis fascia covers an area of about five square inches on each side of the pelvis.

The sacrum is lined by a thin, fibrous membrane which we will name the sacral fascia; hence the internal pelvis is lined by the obturator fascia proximal, the levator ani fascia proximal, the coccygeal fascia, the pyriformis fascia, and the sacral fascia. This nomenclature we recommend as simple and as facilitating the easy acquisition of the internal fasciæ of the pelvis.

The use of the levator ani fascia proximal is: (*a*). to sustain the pelvic viscera, and is analagous to the fascia transversalis-abdominalis; (*b*) to form a receptacle pouch on each side for the pelvic viscera, which assists in closing the pelvic outlet, proximal, the muscular floor; (*c*) to fix the pelvic viscera; (*d*) with its proximal pad of fat and snow-white connective tissue, to support the pelvic peritoneum; (*e*) to resist the pressure of the abdominal muscles and the diaphragm, and (*f*) to serve the useful purpose of separating the perineal tissue from the peritoneum.

This latter anatomic condition limits inflammatory and infective processes from either perineal or peritoneal spaces. Further the levator ani fascia proximal forms the pelvic floor, and by its strength prevents pelvic hernia. The blood-vessels are placed proximal and the nerves distal to the levator ani fascia proximal. The levator ani fascia proximal and distal limits nearly all fistulæ to one or to one and one-half inches proximal to the anus. A disadvantage of the levator ani fascia proximal is that it is perforated by nerves and vessels which carry sheaths of connective tissue; these sheaths allow infective processes to pass from the perineal tissue to the subperitoneal tissue and vice versa. Deficiencies occur in the fascia, excavations which are filled with fat.

The fascia of the pyriform muscles consists of an extension dorsalward of the obturator proximal and levator ani fascia proximal. Both fascial planes blend, the one from the ventral margin of the sacrosciatic foramen and the other from the dorsal margin of the coccygeus into a thin fibrous membrane which envelopes the pyriformis muscle and the sacral plexus of nerves. The pyriformis fascia is perforated by the gluteal vessels and nerves to gain the gluteal region. This plane of fascia is so thin and delicate that one can scarcely dissect it without lacerating it. The levator ani fascia distal (anal or ischiorectal fascia) lies in immediate and intimate contact with the distal surface of the levator ani muscle. This fascia begins at the white line and

becomes lost on the rectal wall. It is profoundly and intimately connected with the muscles. The levator ani fascia proximal and distal blend with the rectal wall about one-half to three-fourths inch, the anus, and rectal perforations generally occur distal to the insertions of this fascia. The fibers of this fascia are included in all deep suturing of extensive colpoperineorrhaphy. By including its fibers in the sutures, the relations of the levator ani may be partially restored to the normal relations. The sacral and coccygeal fascia lines the ventral surface of the sacrum; it has localized points of increase and decrease of thickness. The thickest portions are those located along the lateral margins of the sacrum, and especially around the ventral sacral foramen.

TRIGONUM UROGENITALE OR TRIANGULAR LIGAMENT.

The triangular ligament (deep perineal fascia) of the lateral pelvic walls closes the pelvic floor ventrally. It is the result of the union, coalescence, of the bilateral obturator fascia extending from the lateral pelvic walls toward the center. It is a prolongation of the obturator fascia across the pubis, and Winslow called it the ligamentum interossei pubis; Carcassone, the ligamentum perineale; Colles, the ligamentum triangulare urethræ. It is the deep blade of the fascia perineal and is an integral part of the obturator fascia. It is the middle fascia of the perineum, or Camper's ligament. It is the trigonum urogenitale, the triangular ligament. It occupies the deficiency occurring between the ventral or pubic insertions of the levator ani muscle. It is a wonderfully powerful fibrous structure in fixing the distal end of the vagina. It is stronger in males than in females. It is the structure which retains, maintains with powerful grip, the distal end of the vagina in a ventralward and proximalward curve. The vagina pierces the triangular ligament whose fibers fix, interweave themselves in and around the vaginal walls. It joins dorsally with the distal margin of the distal edge of the superficial perineal fascia. If one dissects all structures from the vagina except the triangular ligament will become apparent at once what a powerful support it is to the distal end of the vagina. The triangular ligament, as its name implies, is triangular in shape, aponeurotic in structure, extending as a tense fibrous septum between the ventral part of the perineum and pelvis. It is attached on either side to the rami pubis and ischium. Its distal or dorsal margin is ill-defined, blends with the superficial perineal fascia at the ischioperitoneal fascia, where it gradually loses itself on the distal surface of the levator ani muscle. It sustains and fixes the urethral canal. It is pierced by the vagina at its base, dorsal, its weakest portion. It serves the useful purpose of connecting the bladder and vagina to the pubis and of retaining adjacent organs in fixed relations. By its connection with the ischioperineal ligament (fascia) and levator ani muscle it serves to strengthen the distal region of the pelvis dorsally and aids to fortify the rectum with its muscles. By dissection, it is plain to see how the triangular ligament closes the perineal triangle and the levator ani closes the dorsal triangle. The triangular ligament extends dorsally on each side of the vagina and blends not only with the distal ledge of the superficial perineal fascia, but very intimately interweaves and blends with the ischioperineal ligaments, making a powerful fixation for the vagina at its distal end. The triangular ligament in conjunction with the ischioperineal ligaments lends to the perineal body a "Punctum Mobile." In perineorrhaphy much attention should be given to the factor of including considerable parts of the triangular ligament, levator ani fascia proximal and distal and the ischioperineal ligaments in the deep suture, which secures a ventralward curve for the vagina, and also by forcing medially adjacent perineal tissues, it aids in producing the normal curve of the rectum ventralward. This ligament is a very important structure, serving many purposes of support and aiding in repair. It is continuous with the levator ani fascia distal and the levator ani fascia proximal. The superficial layer of the deep perineal fascia of Colles is a strong fibrous membrane. It extends from one ischiopubic ramus to the other. This

membrane blends dorsally with the margin of the triangular ligament, producing partly ischioperineal ligaments. The superficial layer of the deep perineal ligament is less in extent in females than in men, on account of being pierced by the vagina. In perineorrhaphy it is of considerable aid in restoring the relation of the parts by allowing the deep sutures to draw the fascia medianward. The ischioperineal ligaments extend from the ischial tuberosities to the perineal body. They are strong aponeurotic bands of a very resisting character. They result from the union of the lower border of the triangular ligament with the deep layer of the superficial fascia. The fibers of these ligaments play an important role in extensive colpoperineorrhaphy. These ligaments form a conspicuous structure in every dissection of the female perineum. In the advancing head the ischioperineal ligaments are put on the stretch and gradually forced backward. Should they rupture, by extensive flap-splitting and deep suturing the two layers of fascia which blend to make the ligament could be partially restored.

(D) THE PELVIC VISCERA.

The Pelvic Viscera. { 6, Bladder. 7, Urethra. 8, Vagina. 9, Uterus. 10, Rectum.

The Pelvic Viscera.—There can be but slight doubt they are intimately connected with the pelvic floor and compose part of its supporting structure. In studying the physics and repair of the pelvic floor they can not be omitted. The distal portions of the bladder, urethra, vagina, rectum and cervix are knit and blended inseparably with the pelvic floor. The urethra has an intimate connection with the vagina, the ventral portion of the pelvic floor, and resists intra-abdominal pressure to a certain degree. The connection of the bladder by visceral layers of fascia to the pelvic wall is the most important. The wall of the vagina is fixed in the wall of the pelvic floor by fascial and muscular attachments; hence, it aids to resist intra-abdominal pressure. Also the vagina is firmly attached to the urethra, bladder and distal end of rectum. The distal end of the rectum is an intimate portion of the pelvic floor. The cleavable planes of visceral fascia aid to fix the rectum and anus in the pelvic floor. Connective tissue attaches it to surrounding tissue and viscera as well as its intimate connection to dorsal vaginal wall and perineal body.

Is the uterus a part of the pelvic floor? I can not agree with Hart that the uterus merely rests on the pelvic floor and is not suspended. I must consider the uterus a part of the pelvic floor. The cervix is embedded in the pelvic floor and is a part of it. The uterus being suspended by the bladder and vaginal attachments, also by the broad, but especially the sacro-rectal ligaments aids to resist the intra-abdominal pressure. The idea that the uterus is a key in the pelvic floor, I think, should not be abandoned. In vaginal hysterectomy ample evidence exists that the sacrorectal ligaments are the solid, powerful supports of the uterus and they are interwoven with the cervix in the pelvic floor.

[Written for the MEDICAL BRIEF.]

Race Suicide.

BY J. A. HOUSER, M. D.,
Author of "Is Marriage a Failure?" "Knocking at the Gates of Hell," "Beautiful Woman," "Zenda," "The Spirit of Life," etc., etc.
Indianapolis, Ind.

(Continued from page 875.)

Negroes Barren.—In amalgamation of the negroes with the whites, a state so much sought for by the negroes, is fast coming the suicide of the race. Another evidence of man's tendency to seek his own destruction.

There are two ways by which the negro obliterates his race by mingling with the Anglo-Saxon. The creative power to transmit race, life and color is much stronger in the white than the black race. If a black man and a white woman become the parents of a child it will be half white, or equally divided in blood between its parents. This shows the white female to have as much transmitting power as the black male. But if a white man and a black woman produce a child it will be three-quarters white. The white man has greatly more race-transmitting power than the

black woman. So, through amalgamation of the races, would fade the color to the white.

Still a more potent factor than this menaces the negro race in this country: the barrenness or sterility of the mulattoes. This condition appears in about the third or fourth generation, among many yellow people. Especially is there no productiveness present when two of them, the strain of three or four generations of amalgamation, unite. In many cases they remain childless through many years of seeming sexual vigor. Either of such might show some limited procreative power united with a companion of pure white or black blood.

The last United States census shows the negroes not to be equalling the whites in the ratio of births, and, for a want of more vitality in the children the negroes succumb to the diseases of childhood in a greater proportion than the white children. In one county in Indiana, where there are several hundred negroes, it is reported that there has not been a birth in a year.

The loss of the creative power seems greatest to the negro when amalgamated with the Anglo-Saxon, and probably greater in this climate than it would be in the tropics. It surely seems to point to a settlement of the negro problem in the United States.

But in South America the various mixing of races shows, so far as I know, none of the effects of sterility. In some instances some remarkable and beneficial effects of miscegenation are seen.

The Semitic peoples invaded Ethiopia eight thousand years before Christ. They subjugated the negroes with the selfish designs of a race of commercial adventurers, consciously and knowingly. But the negro women subjugated the Semitic men, with the result that a new race was formed, the Negroids. Atavism, even unto this day, though a hundred centuries have intervened, points to the past mingling of the white men and the negro women. The observer of atavistic handwriting on the walls of living, human history, need not remain long on the crowded streets of any great city in the world to see the translated message from the remote past, in far-away Abyssinia. The occasional thick lips, flattened nose and curly hair of some Semitic descendant of the invader, reminds us that life never dies.

These signs of this, the marking of an epoch in race history, disappear to again come to surface at long-separated periods, like the driftwood in the eddies of a flooded river, collecting here and there to be scattered by the rushing waters, and again collected miles below. In this case, let the miles be called centuries in the river of human life, and the driftwood the cell-formation of atomic life that has drifted in the stream all these eventful ages.

In the United States white men are more and more mingling their blood with that of the dark woman of Africa, as black men are with the frail and pale females of weakness and passion.

With some negroes the desire for immoral relations with white women becomes the mania of insanity. This is to be expected when an inferior race, whose animal propensities dominate the moral and intellectual forces, is placed on the plane of equality with the white race. It in this which leads the black fiends to assault and murder their white victims. Though swift and barbarous revenge is, usually, inflicted upon these beasts, the terror of a white man's revenge can not overcome the temptation. Should these assaults continue and increase, race suicide might be more rapid than that caused by sterility incident to mixed blood.

The number of negroes who have white wives is increasing with time. Though all the States have, I believe, laws against miscegenation, passion overthrows law and animal instinct defies decency. It is claimed that ten per cent of the white women, thrown among negro men as their equals, in certain menial work in cities, become the paramours of their black companions. If this is true, as it seems to be, it is but another evidence of the depravity engendered when the noble, though women, are degraded to the condition of servitude on an equality with the debased. Pope's philosophy applies here:

> Vice is a monster of so frightful mien,
> As, to be hated, needs but to be seen:
> Yet seen too oft, familiar with her face,
> We first endure, then pity, then embrace.

Danger in Too Many Children.—While the falling off, to a great extent, in this country in the numbers of the better classes of Americans, or any other country, would be a calamity, a greater evil will surely follow in the excessive birth-rate of all classes, when it reaches the stage of crowding. America is a greater and a better country with our present number, or a hundred millions, than it can ever be with five hundred millions. In controlling the birth-rate and limiting immigration lies our permanence and our greatness. But this may put the national prize beyond the circle of possibilities, surely beyond the probabilities. It is in the fact that the birth-rate of most of Europe and all of Asia is too high that America has become the dumping-ground of their human refuse. France rises above this unwise and unbalanced condition, calm and serene, in the wisdom of preparing for human necessities. France has reduced the birth-rate to a balance with the national resources. Since the land of France can not be increased, the number of the people is wisely limited to the measure of acres. France considers an ounce of preventive better than a crowded condition, which would drive her children to seek homes in an alien land. This has been in direct opposition to the teachings of the church that has dominated that country for centuries, but it was a necessity, and necessity knows neither law nor religion when fate commands.

Of all the nations of Europe, France is the happiest and the best satisfied with home. It may not be overdrawing it to say that the French are the most satisfied people in the world. This they evidence by staying at home, while the overcrowded condition of other European countries drive their starving children over land and sea to find the comforts of life. Of the more than one million one hundred thousand who sought homes in America in 1906 but few French were to be found. These distressed exiles of misery came from countries where the blindness of passion is stronger than the philosophy of human affairs.

Though the world may criticise France as it will, the fact remains that France has avoided the question of unequal conditions between babies and bread, that other nations fail to comprehend. While other countries trusted to Providence and were overwhelmed in the rising tide of helpless, starving humanity that, finally, must be pushed from their native land, to go among strangers for bread and servitude, France trusted to reason and reaps the reward of peace and plenty.

The nation which fails to solve the problem of babies and bread lacks the statesmanship of a great people. This statesmanship must be found with the people, and rise up from them, and never be expected to come down from the politicians, who seek office for personal gain, and not for the welfare of all.

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates and men decay."

A Great Age.—I would not deny that we live in a great age. The wonderful genius of this period marks an epoch in the world's history. In some ways we can justly claim to surpass all past time and works of man. Especially true is this of mechanical inventions, and in systems of business combinations. Our machinery is little less than a beautiful acting miracle. Without the senses of flesh it performs the most delicate work of the hands. Its adjustment surpasses the eye in accuracy, in delicate lines and curves that human sight can not trace. Machinery works out the problems of science where human patience wearies and fails. It carries messages on wire where human feet can not go, and snatches the wings of the wind, and sends intelligence on the vibrating bosom of the air. It drives its myriads of ships through the sea, and sends its countless trains over the land at a speed and with an exactness that challenges human understanding. Finally, it seems to be cramped for space in the narrowness of continents and oceans, and now invades the sky and demands the right-of-way from the clouds. Besides these things, the mechanical works of the ancients are but toys for the amusement of children.

The most colossal works of the ancient Orientals are but crude piles as compared with the elegance and utility of a great modern building. The golden house of Nero, and the ivory palace of Ahab were

but evidences of barbaric wealth compared with the palaces of today.

The New York subway is more wonderful than the Hanging Gardens of Babylon, and the Brooklyn Bridge far surpasses the Pyramids of Egypt. These great American structures serve a necessity of humanity. The ancient ones only pleased a fancy—one built to satisfy a homesick woman, and the other for a grave, or to record the height of the water in a flooded river. A toy or a pet monkey would have done for the Babylonian, and a hole in the rocks would have served to hold the bones for future archæologists; and a stake, driven in the side of a hill, would have reminded the Pharoah where the water reached.

This unequal comparison is caused by the world having gone mad after the modern god (a transformation of the other one made by inserting an "l" in the spelling).

Great things are done that they may make money for men. The combinations of this age encroach so much upon the individuality of man that he finally becomes a unit lost in the numbers. He is but a part of a machine whose soul is a system.

This rushing of the world by machinery is not an unmixed good. Go to the farm for a lesson, if you will. Modern machinery cultivates the earth so well that it produces double, thribble, quadruple. But does it not do so by taking four times as much as formerly from the soil, reducing its productive life by three-fourths? The vital substances of the ground are so much, as the water in a pool. If either is removed faster than it is refilled it will, in time, become exhausted. The forests, the fountains of oxygen, have been reduced to but a fringe, while the great furnaces which consume much of the forests, and all the coal that is mined, consume the waning supply of oxygen so rapidly that the time will come when it will be a commodity to manufacture and sell. These things invite race suicide.

In the dump of a city is the doom of the nation. The life of the land is taken to the markets of the city to there find its way to the sewer and the dump, burned up or carried away by the rivers to sink in the estuaries or rise in gas. But the earth is robbed. From her generous bosom we snatch the elements of life as ruthlessly as a wolf takes a lamb from the fold, and have not even the poor grace to lay the ashes back to rest and nourish.

While we have surpassed the ancients in mechanical genius, we have also surpassed them in destroying the earth, the source of our own life. It is another story of the goose and the golden egg.

While the world has gained in mechanism, it has lost in philosophy, eloquence, poetry and statesmanship. Even more has it lost in the loss of sentiment. Sentiment, that sweet dove, the messenger that flies from soul to soul with love and peace! When it is dead, then let all the world die. To live without sentiment would be existence without the joys of living. What a flower is to the garden, the rainbow to the sky, or the twilight is to the night, sentiment is to human life. It loves the blue eyes of the girl, it kisses the lips of the babe, it waits with patience and fidelity at the couch of suffering, and dismisses the loved ones back to God, whispering, "We shall meet again."

Without sentiment poetry is only mechanical jingle, and oratory has no soul.

In the evolution of conditions human thought has kept pace with the change. It has taken on the features of a mechanical grind, and is a part of the machine work of the times. There is no orator today whose matchless gift of a soul's portrayal of human thought, philosophy and passion reaches the beatific heights of serenity and glory, where it will remain for the admiration of all the coming ages.

Though the world has thousands of fine talkers, clever talkers, cunning, shrewd speakers, where is the immortal for the Halls of Fame? Neither the bar, the forum nor the pulpit measures up to the demands of this age for one who can give a voice a form. So, with poets, many write pretty verses, delightful verses, well-constructed verses, but not immortal poetry. Through all their rhymes run the little wheels of commerce, and in them we hear the jingling of the guinea.

And where is the philosopher to give the world a new system for life and thought? In the past, at well-measured

periods, the philosophers rose above their kind, like mountains out of the sea, and stand today in their empyrean glory, while the billows of commerce and the tides of years surge about them in vain. They created a new world of thought that the world entered into. But search the world as we may, we find but a forest of men, and not a giant philosopher among them rising to the stars.

This is an age of restful dissipation, and voluptuous idleness for the gorged few who live upon the gold coined from the blood of the plodding, toiling millions, for whom the factory gate is the opening to a prison.

Bachelors.—In the United States there are more than seven millions of bachelors and a corresponding number of single maidens of like age. This adds its full share to race suicide.

Seven million families of but three children each, during the reproductive period of woman, from fifteen to forty-five, would add twenty-one million people to our race. If children are the chief object of existence, some means should be found to utilize these bachelors and maiden ladies to add to the numbers of their kind. These unmarried men and women are, usually, of a higher grade in intelligence and education than the average, which has its effect on the intelligence of the nation in retarding it. The presence of more than seven million of mature, unmarried men, adds nothing to the morality and chastity of society, nor reflects much credit upon themselves. It has a tendency to make permanent a system of concubinage, with all the concomitant evils that belong to sexual depravity. It would be better to have polygamy, and let the maiden ladies be plural wives, than as it is. I do not mean to convey the idea that the unmarried women whom we call "old maids," have morals on as low a plane as that of the bachelor. This would be an injustice to a noble class, whose moral rectitude ranks up with the best. The bachelor's paramour is rarely the old maid. She may be a weak girl or a morally unbalanced married nymphomaniac. More frequently, however, it is the hardened siren who makes financial traffic out of the sanctity of womanhood and hope of the soul.

To elevate bachelors, politically and socially, is to encourage an unnatural condition, to the detriment of the home. In choosing between the married man and the bachelor for office, other conditions being equal, we should never consider the bachelor's claims as within the radius of the best interests of all. The representative of a family is the best representative of the people.

Mingling of Races.—In the mingling of the Anglo-Saxon race with the brown Asiatic Mongol, and Malay races, and with the negroes, will come the suicide of the white people of America. Amalgamation is the inevitable result of the mixture of the races. The negro is the most objectionable to the white race, but a far greater number of mulattoes than of full-blooded negroes is an evidence that the barriers of race prejudice is but a frail guard to a large class of both colors.

The objection to intermarrying with the brown races is less than with the negroes, and will scarcely hold back the young white man, always so susceptible to the languorous charms and yielding submission of the Oriental women. To many Anglo-Saxon men the women of our race are too self-possessed and opinionated for a loving companionship. These characteristics are more common in the American women than in her sisters in Europe, and conspicuous by their absence in the brown women of Asia.

The intellectual standard of the American women being so much higher than their Oriental competitors that throng our shores, will also count against them with not a few men of their own color. A man is largely a vain, conceited, selfish bigot in pants, and seldom falls in love with the same type though she does wear skirts. The education of American girls teaches them independence and self-reliance. These qualities, aided by our social system that gives women the liberty to come and go as they please, make them able to care for themselves, personally and financially, quite easily. The necessity for a husband is lessened to a mere convenience and companionship, under this system. Hence, many of the more intellectual and strong-minded women prefer single life. With such, maternal love is comparatively weak, and

children a greater objection than a husband. They are given far more to the mental and philosophical influence of the cerebral convolutions than to the amorous suggestions of the cerebellum. Such remain single from choice, and liye unto themselves.

The superfluous man that now finds his temporary, but not always modest, affinities more numerous than a state of purer morals would suggest, will, in after years, wnen the yellow and brown, and more amorous women, swarm from the Pacific shores, find a wife in the less austere, and less intellectual, and less fair. But even more rapidly will the white women, of the less intellectual type, marry the brown men. In this rushing together of white and brown races a new race will be born. What effect this mingling of blood will have on our western civilization time alone will tell. It is not risky, however, to predict it will turn the hand of progress back toward the hour of more primitive and Oriental life than our blood has known, as yet, on this continent.

The Anglo-Saxon blood that remains pure the longest time during this reign of sexual supremacy will be the highest cast. But they, without the hedge of a monarchy to sustain them in power, will, finally, become victims of the democracy of virility.

The weakest point in the politics of a republic is the tendency to cater to the base and the low, if they have numbers. It is this spirit that threatens our race, as it does our national pride. The mingling of colors and blood will lower the standard of morals, mind and patriotism, and lower the flag of the free. The republic will not long survive the advent of millions of Chinese, Japanese, and other dark peoples from Asia. A government, like a stream, can not rise above its source.

As all the people are the source of government in a republic, ours must be lowered by the mingling with the hordes from Asia and with the vicious millions from the slums of European cities. With more than a million from Europe annually, and of a lower grade, intellectually and morally, than came in past years, to be greatly augmented with each coming year, they alone, it seems, would solve the problem in favor of a monarchy. Add to this unpleasant feature many more millions from that exhaustless forest of human animals, India and China, aided by Japan, Corea, and a due number from the other dark spots on the globe, down even to Borneo, with its wild men, the end of the republic may not be so far off. Add to these swarming human pests the ten million negroes already here, well on the road to amalgamation, and a rough guess would not claim white supremacy to outlive this century.

And thus it seems that fate wills that the greatest and most beautiful picture of humanity, painted on the canvas of truth by reason and faith, shall be spoiled by the instincts of passion.

Exhausted Soil.—The exhaustion of the soil from the heavy drain on it when the over-crowded conditions shall demand a crop every year from every available acre, will be no small factor in hurrying race suicide. Even now, with our present population, which is very small as compared to the millions that will inhabit this country a hundred years hence, is draining heavily upon the resources of the earth.

Millions of acres that irrigation will add to agriculture in the West, will aid greatly in feeding the prospective millions heading this way, and further defer the inequality between lands, resources, and humanity's unwise increase. But, at the same time, the fact of our redemption of millions of fertile acres will invite the swarms of hungry creatures from their homes of want, barren hills and sterile plains. They will come to sap the new world as they have the old. From here they can turn to South and Central America, and devour that like a swarm of locusts would the leaves of a tree. They can go North, until the snow line thins their ranks, to meet the limited food supply. To meet such conditions as these the wisdom, statecraft and the cunning of priestcraft has taxed their wits but found nothing better in Pagan lands than the baby tower or the monster of the Ganges, and the prevention or abortion in Christian countries.

As nature meets all demands upon her, in some way she will in such cases as the future may bring, but never with the

hand of gentleness or the voice of mercy. Pestilence and famine will feed upon the hungry, and sterility deny the weak the power of reproduction, and thus avert the repetition of more dreaded conditions.

Unfortunately, modern transportation disarranges the adjustment that natural forces have made in older countries by bringing their millions to new soil and new conditions, where their dormant virility awakens to run riot. While they do not drop to a lower plane than they and their kind have lived upon for generations, they have more strength to indulge their animal instincts, and do so unchecked by neither the sentiment of modesty or the foresight of philosophy that would lead to a thought for the welfare of their kind.

If science can avert over-production of the human species, along with the many other beneficent things it has done, it will not only save the race untold sufferings, but elevate it to a plane of self-control. To stimulate the soil to increase production, and add millions of acres from idle desert waste, can not alone do this. It must enlighten and teach humanity to limit its birth-rate to the capacity of the bosom of mother nature to feed her children. This lesson can scarcely be expected before the dire calamity of starvation has signaled its necessity.

In all ages the school of suffering alone has taught the wisdom that saves the race, God setting the example with fire and flood, whose flames and waves, even to this day, seethe and surge around the immortal names of Lot and Noah.

Religious Change.—A change wrought in religious sentiment of America, by the influx of the millions from Europe and Asia, will be as great as that in any of the other affairs of humanity. While the zealous Christians will struggle with a renewed zeal and redoubled energy for awhile, the hopelessness of the task will finally be so apparent that fate shall soothe the intensity of over-wrought devotion into placidity of compromising rest.

When Alexander the Great had conquered the seventy cities of Asia, and the storm of Asiatic force had wasted its energy upon the Macedonian's walls of men, it could only sigh into rest from sheer exhaustion and accept the inevitable. Then both necessity and policy opened the way for peace and fraternal relations, which enabled the conquered to accept the boon of Greek democracy the hero brought, and take up the work of scattering it to the world. In doing this, they did not lose the good of Asia, but added the hope of freedom that was destined to liberate others before their own land was emancipated.

This was the result of a superior people carrying a lofty and noble truth to receptive minds; as might be expected, this seed bore fruit that has enriched the whole world.

But when an inferior, mongrel horde overruns a country, and, by almost countless numbers submerges a noble people, and with their debased nature, contaminates their blood, no exalted ideals, such as Alexander the Great's conquest left for the inspiration of the seventy cities. With the pollution of Anglo-Saxon blood to such an extent as the invading hordes would promise, the genius of intellect that has carried the great republic so far above the other nations, would be hushed in the tumult of a Babylon of meaningless tongues.

As deeply to be regretted as a war with the dark Orientals would be, it would still be a far less calamity than the overrunning of our country by the cunning, deceit and degradation of Asia. If only the army and navy can stay the yellow flood, and hold it to the other side of the Pacific, Americans will not be slow in deciding as to the means of protection.

If England, Germany or France should attempt an armed invasion of the United States, to subjugate our country, we would resist until the last man fell with his face to the foe.

And yet, such an invasion would be far less in its evil and lasting effects, though we should surrender and welcome them as our master, than a peaceful invasion of the yellow parasites that creep and crawl from the human ant-hills of the Orient, to swarm over our valleys and plains.

It would be a less evil and less humiliating to be subjugated by a noble race of our own kind, in the carnage of war,

than to be debauched by the beastly virility of the scum and slime of Paganism.

A war with Japan, at this time, might be of untold benefit to our nation and our blood.

220-22 Pythian Building.

[Written for the MEDICAL BRIEF.]

Olla Podrida.

BY S. E. MCCULLY, M. D.,
Dallas, Texas.

Sometimes, in a reminiscent mood, the physician's mind wanders over what he has and has not done in his profession, and he begins to sum up facts in treatment, placing in the balance his (olla podrida) mistakes and successes, and suddenly he is aware of what a blind plodder in medicine he has been. Many of us are not to blame for lack of professional sight, for the reason that, at the outset of our professional careers, we will be led into the brambles of theory and there left, too often without compass, or any other mental guide to extricate ourselves. Sometimes I am doubtful as to the methods of teaching medicine in our schools, as now established. I fear there is too much stress placed on branches that (when the doctor leaves his *alma mater*) are of little practical use, and subjects such as the practice of medicine, *materia medica* and therapeutics and obstetrics, on which he must make or mar his reputation, are too lightly treated. There should be a distinction between laboratory men and those whose life-work is to be the practice of medicine. Bacteriology may be, and is, a nice distinctive method of diagnosis, but physical symptoms to the acute observer without a laboratory (and how many of us have a laboratory, or can afford a well-equipped one?) seldom lead him astray. Then, in the early stages of all febrile disorders, the plain and manifest duty of the physician is the elimination of toxins. When the temperature rises to 102° F., then, practically, all elimination ceases; then the blood becomes loaded with morbific poisons often more dangerous to life than the original toxin or "germ" that precipitates the fever. Take pneumonia, where it is very doubtful whether the pneumococcus lanceolatus is anything more than a product of the disease—may be a scavenger; if we believe this micro-organism is the primary cause of the disease, and not a sudden loss of caloric due to great exposure, then it would be the manifest duty of the physician to exhaust every method known in an attempt to reach the bug suddenly turned loose in the system to work his unmolested will; if, on the other hand, we believe that pneumonia of an active form is invariably due to a rapid drop of temperature, that the induced fever is simply a reaction, and that the greater the loss of heat the greater the reaction will be, the more intense the fever, with correspondingly violent symptoms; then our duty is to control the fever, reduce pulse and temperature, leaving nature to work out control of all the bugs and other *materies morbi* that infest the individual attacked by this fatal disease. Long before the discovery of the theory of diseases being due to micro-organisms in pneumonia, I used to give minute doses of tartar emetic, with potass nitrate and Dover's powder from every two to three hours, and got better results than my neighbors; but when I later adopted aconite, gelsemium and lobelia, I never had a case of pneumonia die on my hands, and I invariably get resolution in from three to six days after the attack.

Your medical agnostic will rise up and denounce my cases as only congestion of the lungs. Brother, the next case you get just give specific tr. aconite one drop, gelsemium three drops, lobelia two drops. Make up a glassful in the above proportions and start with it every half hour. Follow it up until there is a distinct slowing of the pulse, and from a half to one degree of fall in the temperature; then give it every hour till the pulse is near normal; then give it every three hours, and continue till resolution is established, and, given an ordinary constitution, you will never again lose a case of pneumonia.

In all febrile conditions, if the physician will control pulse and temperature, the excretory organs will take care of the products of high temperature and suppressed secretion, and while it may be a source of pleasure to make your cultures,

differential diagnosis will not be necessary. Instead of permitting the disease to exhaust the individual by burning tissue, and staying the processes of nutrition, exhaust the disease by opening up the viaducts of the body, and giving nature an opportunity to throw off toxemic conditions. Hundreds of patients die from heart-starvation, due to excessive and uncontrolled rapid contraction. To start with, were it possible for a normal heart to beat continuously for, say, twenty-one days at the rate of one hundred and thirty contractions to the minute, when normal would be, say, seventy-five, and were it possible to do it without febrile conditions, that heart would be in a weak, flabby, starved condition at the end of that time. But with a pulse of one hundred and thirty and a temperature of 103° or 104° F., what must be the condition of nutrition of that heart, as well as every other tissue in the body? We too often fiddle the poor heart; brain and body burns. We fiddle because we are medical agnostics, trained by an agnostic professor whose gray-matter never was illuminated with specific medication.

Lay down the principle in all cases of fever, that a free use of non-irritating antiseptics is good treatment, and where no contraindications exist a flushed bowel generates no toxins. In my life, covering forty-five years of active practice (and I am still a worker in the medical hive), I have attended over one thousand four hundred women in confinement. Of that one thousand four hundred one died from embolism. The rest of my cases made good recoveries except two. They had each mild attacks of septicemia; both recovered. My forceps cases were, all told, nine. Two cases I had where I was forced to remove the bodies in sections—the bones of the skull, the arms, then the legs. In one case the child weighed seventeen pounds when the pieces were placed on the scales. The other was a child of six and one-quarter pounds, and the mother had a pelvis so small that I doubt if a living child weighing two pounds could have passed the arch. A majority of lacerated perineums and cervixes are due to the *hurry-up doctor*. My old obstetrical professor used to tell his class at the beginning of each lecture: "Meddlesome midwifery is bad." Any attempt to use forceps before the head has cleared the cervix is simply infamous, and is almost certain to result in rupture. Brother, before the pain starts have your index finger well up between the cervix and the head, then stretch the cervix by passing the finger around the entire circle, at the same time stretching the cervix freely. By doing this, usually two points are gained: The pains are increased, both in rapidity and volume, and your dilatation lets the head engage the arch, and thus no rupture of the cervix will ever take place. Now, when the head reaches and passes under the arch, wait! Wait! Give it a chance to make and pass the plains till it reaches the perineum. If the perineum is unyielding, use hot cloths, and change, but leave your forceps in the bag. If the perineum will not yield, it is better to cut than to rupture; for you have a surface that will heal immediately, if properly sutured. Brethren, for God's sake, do not strew your life's pathway with female cripples. I never ruptured a cervix, never ruptured a perineum. I resected one, immediately sutured it, and had union by first intention.

Now, a word about skin diseases: Outside the syphilides, reader, did it ever strike you that every form of eczema is a fungoid, is amenable to local treatment, and belongs to the family of vegetable fungoids? If you are a delver into the mysteries of microscopy, here is a field for investigation. Find the fungoid, name it, and photograph it. Take, as an example, a persistent case of eczema capitis, where there is layer after layer of scabs. Just remove the scabs with soap and water, and when all are off that can be removed by that method, start in yourself and clear the scalp of every scab. You will find patches of ulceration, and patches where the skin is rough and scurfy. Now take glacial acetic acid, reduce it by adding an equal volume of water, and treat as many of the sores as your patient will stand by applying the reduced acid with a camel's-hair brush. Do not stint the application. Often one application will do the work; but just watch, and repeat, if necessary. Now

make an ointment as follows: Ol. eucalyptus twenty drops, ol. betul twenty drops, crysophanic acid ten grains, pyrogallic acid six grains, white petrolatum two ounces. Mix the acids and the oils to a consistent mass, then add the petrolatum, and apply twice daily, washing the head with warm water and castile soap. Where in patches on the body, remove the scales and apply acid and ointment similarly. Where you meet up with a case of snowflake eczema, and the whole body is involved, use No. 8 acetic acid, reduced by adding to it an equal volume of water, then sponge the entire body, and substitute raw linseed oil for the petrolatum.

559 Ross Street.

[Written for the MEDICAL BRIEF.]

Abdominal Diagnosis.

BY A. W. REDDISH, M. D.,
Sidney, Ohio.

In no field has diagnosis made greater strides in the last decade than in the abdominal region. This is well illustrated by the statements of two eminent surgeons. The first, Lawson Tait, about ten years ago, gave voice to the following pessimistic quotation: "Exact abdominal diagnosis is impossible, and he who will assert otherwise is either rash or inexperienced." The other, Tuffier, a recent author in an optimistic review of abdominal diagnosis, says: "In practice, by minute and methodical analysis of symptoms and of causative data, combined with laboratory tests, you will, in the majority of instances, reach an exact diagnosis, and thereby a rational treatment."

Tumors of the right hypochondrium are of the greatest interest to the surgeon and general practitioner. They will be divided into three groups: the liver and gall bladder; the kidney and the colon and appendix. Always search for the exact seat of pain on pressure for the maximum sensitive point. In appendicitis the maximum point of sensibility is at McBurney's point, but this is not invariable. It may be much lower and be indistinguishable from the ovarian center, and it may shift to the left iliac region. I once operated on a lady for a femoral hernia, and found the appendix in the tumor mass along with the gut and omentum. If the appendix is subcecal or complicated with typhlitis or typhocolitis then the inflammation may crawl up back of the colon, and the dullness may extend as high as the liver and become continuous with the liver dullness. Generally there is a resonant zone between the dullness of an appendicular tumor and that of the liver. The cystic center is at the point where the gall bladder projects itself against the anterior abdominal wall, which is at the intersection of the outer edge of the right rectus muscle and the tenth rib. It is here that we find the maximum painful point in cholecystitis, perichole-cystitis and in cholelithiasis.

An enlarged gall bladder may extend to the epigastrium or descend below the umbilicus, and thus constitute the epigastric or umbilical centers. Radiations or transferred pains may shift the maximum painful point to the inner angle of the scapula to the point of the right shoulder, to the mammary region, or, if it should chance to follow the phrenic nerve, to the right side of the neck, the nape of the neck, or the head. Descending radiations are infrequent.

In gall-bladder tumors the dullness is always continuous with the liver, and however large the tumor may be, the bottom of the iliac fossa is always accessible to the fingers, which is not always the case in appendicular tumors. Wherever the pains may be, the maximum sensitive point to pressure is at the electic spot of the gall bladder. The patient gives a history of liver disease or previous seizures, and the tumor follows the movements of the diaphragm in breathing. The renal center is located between the appendicular center and the cystic center on a level with the umbilicus at a point further out than the external edge of the rectus abdominalis. This anterior painful point is accompanied by pain and stiffness, with rigidity of the muscles in the side and lumbar region. The radiations are downward to the groin and inguinal canal, often going as far as the scrotum, testicle, penis and labia. Pain in the groin and testicle may be met with in appendicitis.

Ascending radiations to the thorax and arm are not common in renal diseases.

Severe kidney pains may produce a functional impotence of the entire side.

The swelling or tumor of appendicitis is located in the right iliac fossa. It is motionless, firm and circumscribed, if there is not too much edema, and separated from the hepatic dullness by the resonance of the transverse colon.

A movable tumor of the appendix without adhesions may resemble a floating kidney, except for shape and direction of mobility. It should be remembered that a floating kidney will slip back into the lumbar fossa and out of reach while being manipulated. When the appendix, cecum, coils of intestines and omentum are agglutinated without adhesions to the parietal walls, perforations are especially dangerous, as general peritonitis will certainly follow.

Appendicitis has been mistaken for coxitis in children. An error may be avoided by a careful examination of the appendicular region, as follows: "Place the hand flat upon the abdomen at the umbilicus, press deeply with the fingers until you can touch the posterior abdominal wall, and then draw the hand slowly toward the anterior superior spine of the ilium, pressing deeply and keeping the tips of the fingers in contact with the posterior wall. The appendix will be felt about one inch exterior to the iliac arteries on the right side." The symptoms of appendicitis, beside those already mentioned, are: tenderness of the appendix, nausea, vomiting, fever, rapid pulse, and constipation. There may be diarrhea. An evening acceleration of the pulse and temperature with rigors, an increased leucocytosis and an increase in the size of the tumor indicates suppuration. Perforation of the appendix is indicated by severe pain, great tenderness, rapid pulse, marked rigidity and shock.

In hepatic, perihepatic and cystic tumors the dullness is continuous with that of the liver, and they rise and fall with the diaphragm in breathing. Hydrated cysts of the lower border of the liver have these characteristics, unless they are connected by a pedicle, when they are motionless and might be mistaken for a floating kidney or an appendicular tumor that is not adhered to the abdominal wall. In pure hepatic colic due to lithiasis the onset is sudden pain, acute in the cystic center over the gall bladder, with upward radiations, vomiting first of alimentary and then of bilious matter; sweating, thready, rapid pulse and depression with pyrexia, if infections and suppurative icterus is present, if a calculus obstructs the choledochus. These attacks are prolonged, interrupted by periods of calm and accompanied by nervous symptoms. When the calculus drops into the duodenum the seizure comes to a sudden end.

In the diffuse variety the swelling may extend down to the iliac fossa and might easily be mistaken for an appendicitis, but soon the edema of the omentum and of the colon disappears, the tumor becomes circumscribed, rounded, elastic and smooth, perhaps fluctuates, and it rises and falls with the diaphragm. It has become vesicular. Like intermittent hydronephrosis it may disappear by the voluntary discharge of its contents, and it may vary in size. When a well-fitting calculus at the neck of the gall bladder acts as a valve, the vesicle may become enormously distended by the valve permitting the inflow of bile but permitting none to escape. Such tumors may extend below the umbilicus and be mistaken for ovarian tumors. Sometimes these tumors become inflamed, adhere to the abdominal wall and discharge their contents externally. If the contents of the gall bladder remain aseptic, nature may obliterate the viscus by absorption of the contents and atrophy of the vesicle.

Peritonitis and shock, without any apparent cause, with a history of chronic cholelithiasis, may be caused by a calculus ulcerating through, permitting the contents of a septic gall bladder to discharge into the peritoneal cavity.

According to Courvoisier's law, when the common bile duct is obstructed by a stone the gall bladder does not enlarge, but when the obstruction occurs from other causes enlargement is generally present. Complete obstruction seems to inhibit the function of an organ and atrophy of its viscus.

Impaction in the common duct produces jaundice and catarrhal cholangitis. In catarrhal jaundice the pulse is generally slow—from twenty to forty. In severer obstructive forms it is rapid. In case of

infection the suppurative form develops with chills and intermittent fever.

Tumors of the kidneys are reniform, smooth and rounded on the lower edge. The upper edge can not be outlined as it disappears beneath the ribs. They are lumbo-abdominal and are felt in the lumbar fossa. By bimanual palpation they can be easily examined, as they slip about between the hands and drop back suddenly into the fossa again out of reach. They lie behind the colon, which is resonant on superficial percussion. In large renal tumors the colon is pushed outward and the tumor then comes in direct contact with the anterior abdominal wall. Hydronephrosis is a typical, large renal tumor. In the intermittent variety the attacks come on suddenly and periodically, without warning and without connection with the meals. The patient is suddenly seized with pain in the renal center, with downward radiations to the groins, labia and scrotum. A tumor appears in the region of the kidney that was not there before. The patient is rigid in a fixed position, leaning forward or to the affected side. Oliguria, anuria, slight hematuria and bilious vomiting may attend the attack. Suddenly the kidney may become mysteriously untwisted or the manipulations of the physician may set it right, when the attack comes to an end, the pain ceases, the kidney resumes its normal size and shape and only the floating kidney remains to remind the patient of his terrible suffering. The polyuria, which now appears, is attributed to the twain causes of vesical crisis and to the untwisting of the kidney. Cicatricial bands may cause progressively enlarging tumors in the renal region. A calculus may produce hydronephrosis by obstructing a ureter, but a permanent obstruction is not as liable to produce hydronephrosis as a partial or temporary obstruction, because a permanent obstruction tends to produce a cessation of function of the kidneys. The diagnosis of renal calculi is to be made by the presence of pain of a sharp, sticking character, or by a dull aching pain deeply seated, located at the kidney center. The pain may last from half an hour to several hours or longer, with more or less suppression of urine and profuse sweating, by the presence of pus and blood in the urine, in some cases by hydronephrosis if the obstruction is complete and by finding a calculus in the urine after the attack. Before making a urinary examination wash out the bladder, wait a few minutes and then get a specimen of the freshly secreted urine. The Röntgen ray, in the hands of an expert, may be an aid in diagnosing renal calculi. The first symptoms of renal calculus are pain, sudden, severe and continuous in the renal center, with soreness in the kidney region. The pains may abate and come again with renewed severity, vesical irritation, blood in the urine, concentrated urine, crystals of oxalate of lime and uric acid. The urine is acid and of high specific gravity. After an attack the calculus may be found in the urine; hematuria is slight and may be absent. It is never as large nor as persistent as in tuberculosis of the kidneys. The urine may be suppressed by an occlusion of one ureter by a calculus and by spasmodic contraction of the other.

In renal tuberculosis the onset is insidious, but the pain will be sudden if the ureter becomes occluded by a blood clot or by cheesy material. Usually the patient complains of a dull pain in the back, vesical irritation, painful and frequent micturition, early increase in urine, later diminished. Morris claims that polyuria in a frail patient with a tubercular family history, for which no adequate cause can be assigned, should excite our suspicion of renal tuberculosis. Hematuria is an early symptom and pyuria is almost invariably present. The blood is well mixed with the urine, which is acid unless cystitis coexists. Hemorrhage may be copious and persistent. Albumen is present and perhaps blood casts. There is an evening rise in temperature, loss of flesh, anorexia, pallor of skin, night sweats and the presence of tubercle bacilli in the urine. The physician, however, should diagnose his cases before this typical array of symptoms make their appearance, unless he wants to appear dull and stupid. The symptoms which will guide us in the diagnosis of renal tuberculosis are: Pain in the kidney region, not so severe as that resulting from calculi, coming on slowly and gradually, as a rule; dysuria, polyuria,

hematuria, pyuria, acid urine and the presence of albumen, tenderness along the ureters, tubercle bacilli in the urine, which are not due to bladder and prostatic tuberculosis. The disease is chronic and may manifest itself as a pyuria for many years without occasioning much discomfort.

In malignant diseases of the kidney a tumor mass may be made out which increases in size rather rapidly. Hematuria is the most important evidence of the disease. There is a sense of weight and discomfort in the kidney region. In simple suppurative pyelitis, pyuria is the chief symptom, and pus, sometimes accompanied by blood, appears in an acid urine. If the ureter becomes occluded pus collects in the pelvis of the kidneys, producing a considerable tumor. If the patient has been suffering from cystitis with pyuria and alkaline urine, and the symptoms should suddenly change, the urine becoming acid and profuse, with heaviness in the lumbar region, a suppurative pyelitis has developed. If the urine is clear of pus it has become obstructive, and chills, followed by fever and lumbar tenderness, may develop. A movable kidney, during bimanual palpation, slips about like a loose pea in a pod. It may be pushed as low as the umbilicus, and then it evades the palpating fingers and it drops back into the lumbar fossa again. The symptoms produced are a dragging sensation and a general feeling of weakness, dyspepsia with sensory motor and secretory neuroses of the various abdominal viscera. Painful crises, mucous colitis, hydronephrosis from kinking or twisting of the ureters and intermittent albuminuria.

Edebohls says that chronic appendicitis is the chief symptom and most important complication of movable kidney. A floating kidney may be found anywhere in the abdominal cavity, so if a kidney is missed from its usual site search should be extended through the entire cavity for it.

Tumors of the sub-hepatic angle of the colon are generally neoplasms. The symptoms are diarrhea or constipation, bloody stools, melena and a fixed tumor in the sub-hepatic flexure of the colon. If the tumor should be movable in the early stage the diagnosis offers more difficulties, and if it should manifest itself only by slight attacks of obstruction, the diagnosis may be less certain. Carcinomatous rings may form and give rise to only slight symptoms of obstruction, but inducing abscesses. Tuffier says "beyond the age of fifty all acute intestinal obstructions are due to cancer." A contracted intestine, due to muco-membranous enteritis, may produce a tumor. Their relationship to the colon may be traced, for they are movable transversely only. To the palpating fingers they feel like hard cylinders, and they may be found in the sigmoid as well as in the ascending colon. During periods of calm they are dilated, relaxed, filled with liquid, and they splash on palpation, but then the painful crises return again and with them the transversely movable cylinders. These tumors, along with floating kidney and uterine prolapses, all belong to that class of diseases called ptosis or enteroptosis.

In ordinary gastralgia the pain is in the middle of the epigastrium and radiates to the left. There is neither fever nor jaundice. In enteralgia or intestinal colic the pains are in the midabdomen; they are relieved by pressure and by the passage of flatus. Many more conditions might be differentiated, but this paper is already too long. Much is yet unknown; nothing is unknowable, and a positive diagnosis will generally reward the methodical analysis of symptoms and a study of causative data.

[Written for the MEDICAL BRIEF.]

Pneumonia.

BY GEORGE ROBERTS, M. D.,
Lincoln, Va.

For the benefit of your readers who, like the great Osler, say that pneumonia is a self-limited disease, and for which there is no remedy, will cite a case:

Mrs. S., temperature 105° F., pulse one hundred and thirty, in the fourth month gestation, aborting, membranes protruding, absolutely without labor pains; cough incessantly, very dry and rasping; hurried breathing pains in lungs; tongue coated, and vomiting bile. I gave ergot, which was vomited at once. Then decided to direct all treatment to the congestion

of the lungs; gave some calomel and acetanilide, in small, frequent doses, not weighed or measured, to move the bowels. I then put one-quarter teaspoonful each of the fluid extracts of aconite, veratrum vir. and digitalis in three-quarters of a tumbler of water. A teaspoonful of this was taken every hour until sweating occurred.

I called next morning: fever gone; bowels moved twice; temperature normal; no pains; light cough, expectorating rusty sputum. This was at 10 a. m. Left to make another call at 12 m. While away the labor pains came on, and delivery accomplished without further trouble. Returning in the afternoon, found patient comfortable, and recovery uneventful.

All deviations from health are now said to come from faulty "metabolism." This is a modern word not found in medical dictionaries forty years ago.

The majority of cases of sickness are due to auto-infection from the alimentary canal. If this were not so the various patent medicines, pills and purgative bitters would not flourish as they do.

Realizing this fact, it is our duty as medical attendants to clear out the alimentary canal first of all. Nothing answers this purpose as well as small doses of calomel, repeated to effect. A favorite combination of mine is with acetanilide.

I always do my own dispensing, which brings patients back to me when in need of anything. A few powders of calomel and acetanilide turn many a case of sickness. One night a man called, said his girl was passing blood from the bowels. How old? I asked. Fifteen, was the answer. Thinking it fifteen years, I put up six powders at random, containing each from one-half to one grain of calomel, with five or more grains of acetanilide, to be taken one every hour. The next day I was called to see another one in the same family. After attending this patient, I asked where the sick girl was. Imagine my surprise when told it was the fifteen months' baby playing in its crib, apparently well. The mother said she gave all the powders, and was so much pleased with the quick relief, sent for me to see another. This shows what large doses of these drugs babies can stand, but it is not my way, and now I am careful to note the age. When in doubt as to the nature of the complaint, I take from a stock bottle a solution containing epsom salts and sulphate of iron, a teaspoonful to be taken in a tumbler of water after meals. No therapeutic nihilism for me. I know the value of drugs, and use them.

In Compliment to Dr. Rose.

Dr. Julius Bartsch, of Lüneburg, Germany, writes as follows in reference to Dr. Rose's memorial on medical language, published in THE MEDICAL BRIEF, November, 1907:

"In my opinion it is a great testimonium paupertatis that the great medical coryphei have failed in the construction of a logical and scientifically correct nomenclature for the designation of their own epoch-making discoveries. Medicine is creating constantly new conceptions, and for whatever new it creates it requires new appellations, and this to such far-reaching extent as to render the resources of a dead language inadequate for the expression of meanings in exact sense. Thus the custom has been acquiesced in to attribute to a number of words certain interpretations which originally had a totally different meaning. The German schoolmaster had his share, which is not to be wondered at, he being about the best fitted for the task, but, after all, a schoolmaster is but a schoolmaster—not competent to interpret medical terms. On the other hand, the Greek is a logically and distinctively expressive language, and, ancient though it is, is a living idiom, and, therefore, capable of evolution. If, then, Greek philologists are able to bridge over the gap between ancient expression of thought and the linguistic rendering of modern conceptions—a point on which I am not sufficiently competent to pronounce an opinion—then Greek is the language to draw upon. All these arguments do not apply to Latin."

[Written for the MEDICAL BRIEF.]

The Missing Link in Medicine.

BY L. HERBERT LANIER, M. D.,
Aurora, Mo.

How could there be a missing link in the healing art? When we consider that there is today so many people engaged in healing the sick, or who profess to know of certain herbs, roots, leaves, mixtures or medicines, the administration of which will surely relieve any disease human flesh is heir to.

And if, perchance, some afflicted individual, by reason of idiosyncracy, was not cured of his disease by the numerous relatives, all of whom pretend to know of specific remedies for all diseases, then there is no use to suffer longer. The Christian Science healer has offices around the corner, and is ever ready, for only two dollars, to come and tell the patient that there is nothing material, except mind (their fee excepted), and that he only imagines himself to be sick and in pain, though it will take twenty visits at two dollars *per* to get this morbid thought eliminated from his mind.

This particular patient, however, was suffering severely with acute inflammatory rheumatism, and after trying his best to think all was mind, and that he had no disease or pain, he was forced to come to the conclusion that the mind-healer was mistaken, and that he had feet, limbs, muscles, swollen joints, high fever, and much pain, and that he would try a practitioner of medicine.

Therefore he sent for Dr. B. The physician arrived, examined his patient, and left one bottle of medicine. Directions: Two drops every four hours, and some little microscopical granules, one every six hours. The patient continued to take this, and the physician continued to call for three days, and the patient grew gradually worse, and upon inquiry, found that his physician was from that school that teaches infinitesimal doses.

A physician from the regular school was called, and examined his patient, and, of course, regretted that he had not been called sooner, as this dangerous disease had progressed until heart complications made his chances for recovery one in one thousand.

This physician administered some drugs which were indicated, and did some good, though "a chain is no stronger than its weakest link," and when he gave the commercial article of sodium salicylate, instead of sodium salicylate from the true oil of winter green, he made an unpardonable error, and failed to cure his patient. The patient, however, was able, after a few weeks, to be out, and after giving several physicians a chance to cure him and restore the function in the stiff joints, and after all of them had used iodide of potassium, and other alteratives, instead of giving him a course of treatment and curing him with the modern mechanical appliances which we have today, his stomach was filled with nauseating drugs, and he received no benefit, and decided to try an osteopath.

As usual, the bone doctor found that the third lumbar vertebra had been dislocated since infancy, and was causing all the trouble, and he at once began to pull, roll and rub, and did this daily until the patient, for lack of any more money, houses and lots, jewelry or other necessaries, told the bone doctor that he had not been benefited, and would go to the springs when he obtained more money.

Unfortunately, this crippled specimen of humanity came into possession of considerable wealth at this stage of the game, and away he goes to the great cure-all, the Hot Springs, and after several months there we see him back again, no better physically, but relieved financially.

He is still searching for a cure, and as he strolled down the streets one day he heard the voice of a great benefactor, a man working solely for the pleasure there is in uplifting and helping suffering humanity; a man whose smile was so captivating that he unconsciously drew near him; a man who announced, from a goods box, that he was actuated to come to that town because he had heard of the many sick and afflicted there, and that while the physicians did not like him, he intended to do his duty. He could make the blind see, the crippled walk erect, the deaf hear; and cure all diseases in the dictionary of pathologic phenomena. This

generous hearted man said he proposed to do this by giving to the public, at cost, a bottle of Dr. Jones' "Elixir of Life."

We see our crippled friend who was disappointed with physicians, mind healers, osteopaths, and all other healers, force his way to the great man, and buy some of his "Elixir of Life." The ball was now rolling, and hundreds of others crowded up and purchased this "dope," which cost less than the bottle and label around it. After selling all of this infernal stuff, the fakir leaves for another town, where he has had a fresh supply shipped him, and little does he worry about selling it, for he knows *human beings are fools ever.*

What else could our crippled friend do? He was disappointed with his bottle of "Elixir of Life"; in fact, no better. To be sure, his local druggist advertises the very thing he has been looking for: The medicine which it is claimed cheats the grave out of thousands each year. Oh, what a euphonious *lie!* This nostrum composed of water and a weak solution of aromatic sulphuric!

The druggist, however, usually has some ten or a dozen relatives who have been saved by it, therefore, our friend is easily influenced to buy six bottles for five dollars. We find the purchaser, however, returning in due course of time to tell the druggist that the ———— did no good, and that he was going to write to Dr. W. for ten dollars' worth of his absent treatment. And here we lose sight of our friend, while he is in the hands of the king of all fakirs.

Now, who is responsible for this man's wretched condition? First, he is himself, for not calling a reputable physician when he first noticed symptoms of rheumatism, instead of trying to beat some well-meaning physician out of a small fee. Secondly, the responsibility should rest upon the heads of the legislators all over this country who have recently passed laws requiring physicians to pass a rigid examination before they can practice, allowing osteopaths, midwives, mind-healers, magnetic healers and laymen to practice without any examination, as well as old physicians who quit the plow-handles and went to practicing, and only know a few things by experience.

I do not care how rigid the State Board examinations are, but I can not see why physicians should pass them and the other so-called healers are allowed to go unmolested.

The new fangled healers offer to treat their patients for less than the regular physicians. Why? Because they have been to comparatively little expense in getting ready for treating patients, often only renting an office and putting in a little second-hand furniture and assuming the name, Doctor, as hundreds of old physicians all over this country have done until recent years.

It is easy to see why an old physician, who never attended lectures at a medical college, can work for comparatively nothing when we consider that the up-to-date physician of today has to spend not less than five thousand dollars for schooling, hospital training and equipment before he can locate to compete with the healers of all classes, who have been getting acquainted while he was away spending money and time in acquiring knowledge that will enable him to scientifically treat his patients.

And who will the public patronize? The majority will patronize the man who offers them something for nothing (and usually they get nothing for something). The uneducated, so-called doctor, puts in every leisure moment on the sidewalk, or in public places, trying to make himself conspicuous, or trying to make new acquaintances, while the up-to-date physician is reading the latest medical journals, or working in his laboratory over his microscope or test tubes.

The medical profession is not what it should be. First, because there are too many physicians (one hundred and thirty-five thousand) in the United States, and twice as many healers of other kinds, all struggling to make a living out of the public, and the public, in turn, running after false gods and patent medicines, instead of patronizing the limited number of physicians who are endeavoring to elevate the profession above greed and commercialism.

There are a great many things that physicians are guilty of that would cause them to be ostracized and hated by the public in general if the public could only know of them. For instance, if a few middle-aged or old physicians have been doing the majority of the best practice in a town or city, they will mutually agree not to consult with, recommend or mention the name of a young physician, under any circumstances. *Why?* Because they know that there has been a marvelous advancement in recent years in the science and art of medicine and surgery, and they know themselves to be intellectually inferior, so far as therapeutics is concerned, to the man who has recently completed forty-five branches in medicine, when they only had a smattering knowledge of twelve, and they do not want the public to know that some one else knows more than they.

The older members of the profession will sometimes condescend to say that if that young man lives he will be a good physician some day, giving themselves time to live to an old age and die before they think the young man will amount to much. Fortunately, the public is thinking differently these days, and the young, progressive physician is doing most of the work.

The trite old saying: "That united we stand, divided we fall," is as applicable to the medical profession as any other. Yet I would rather attempt to reverse the course of the water at Niagara Falls, regardless of the law of gravitation, and force it toward the heavens, than to try to get any dozen physicians in existence to entertain the same ideas and opinions on any given subject.

Therefore they are divided; there is a missing link, and had they been united there never would have been any demand for the dozen different kinds of healers that are proving such a detriment to our country by sowing the seeds of discord and discontent, and by trying to reverse the laws of nature and science, and increasing their bank accounts at the expense of the medical profession and the ignorant public.

The physicians themselves have done more than any one to cause a demand for those who practice osteopathy, Christian Science, faith cures, etc., first, by trying to treat all chronic diseases, tuberculosis, rheumatism, catarrh, skin diseases, kidney diseases, chronic liver and stomach diseases, piles, fistula, genito-urinary diseases, asthma and diseases of women, and every other chronic disease by constantly administering drugs which only serve to disorder the patient's stomach, and eventually drive him to some healer who does not use nauseating drugs.

Now, do not understand me to say that I do not believe in drugs. I do believe in drugs in acute diseases, but their sphere of usefulness is very limited in chronic diseases, and not until the physicians become educated to use electricity, superheated air, vibration, oscillation, phototherapy, hydrotherapy, suggestive therapeutics, and various other modern methods, will they be able to cure their patients and keep them out of the hands of ignorant, so-called healers of all schools, who never tire of directing the most malicious lies at the medical profession and their work in order to increase their own income.

There are physicians who are not in the profession for the honor that might come to them from a well-spent life in the practice of medicine; such men are often closely indentified with political cliques, and usually are not very well educated. We find them in our State institutions for the insane, members of the State Board of Health, prison physicians, dispensary physicians, on the staff of physicians and surgeons of our large city hospitals—the physician with the best political pull always obtains the place.

Then there is a class of physicians who will lie about things they know nothing of. If some scientific and progressive doctor makes a statement that he can obtain certain results in certain cases by employing certain measures, unknown to the uneducated man, straightway he tells all his patients that the claims of the scientific man are false, and that he is simply trying to make a show for financial gain.

This sort of jealousy has retarded science and modern medicine more than any other thing we can mention. Indeed, "a little knowledge is a dangerous thing."

Just a word concerning the attitude of physicians toward the doctor who advertises. They go into the medical society meetings and all join forces to fight the man who advertises his business, and all claim that he should be classed as a fraud; and just here I want to say that I have spent a great deal of time and money investigating the methods of the physicians who advertise that they are skilled in the treatment of certain diseases, and only in a few instances have I found that they purposely defraud the people.

How is it that some physicians claim that another has no right to advertise his business, yet they patronize, and always try to remain friendly with the druggist who uses half of the daily papers telling the public that there is no use to call a physician, they have drugs that cure everything from ingrowing toe nail to epithelioma. Now, the physician knows the druggist advertises a lie, and that his medicines are worthless, and he also knows that the druggist will prescribe for more people each day than any three doctors who patronize his store. The druggist of today rarely ever tells a patient that he had better see a physician, but he does prescribe and practice medicine without a license.

Then the ethical physician advertises by keeping on good terms with the reporters of the different papers, and getting in all the complimentary notices he possibly can. I know of two physicians who are members of faculties of two reputable medical colleges, who never lose a chance to voice their sentiments against the advertising physician; yet these same men do nearly all the operations for all the advertising physicians in a large city, and they consult with them, and solicit their work—the Dr. Jekyll and Mr. Hyde in medicine.

It is true that the title, Doctor, does not signify what it should; and it means less every day, since opticians who quit plowing and go to fitting glasses assume this title, and since veterinarians, osteopaths, corn doctors, herb gatherers and midwives, all without any feeling that they are intruding upon the rights of others, desire to be called Dr. So-and-So.

And while this is to be regretted, it should not serve to cause the educated, refined and scientific physician to part with those noble traits of character which can only be preserved by constantly keeping in mind his duty to his patients by first acquiring all the knowledge of all the diseases he possibly can, and secondly by equipping himself with everything that will alleviate suffering humanity, and not do it with an eye single to the financial side of the question, but because there is honor there when honorably done.

The missing link can only be supplied by the earnest co-operation of the members of the medical profession with the legislators of each State, in drawing up and enacting laws that will put all who practice the healing art on an equal footing, and laws that will require all who propose to heal the sick to undergo a rigid examination on those subjects, without a knowledge of which they can not accomplish any good.

If this paper serves to cause some physician to change from the galenical pathway in medicine, and step up upon the broad, expansive field of scientific research, and endeavor to elevate the art and science of medicine and surgery to its proper realm in the history of the medical world, then I will feel that my efforts to encourage a much-needed reform is seen and appreciated.

[Written for the MEDICAL BRIEF.]

Pathogenesis.

BY S. B. MUNN, M. D.,
Waterbury, Conn.

The revival of the theory of microorganisms as the cause of disease is perhaps the most significant fact in the medical history of the last half century. There is not much connected with it that is new, although, with the perfection of modern microscopy, we have been enabled to expand the details to an unlimited extent.

Itch, carbuncle and Asiatic cholera were long ago attributed to animalculæ, and the army of pathogenitists divided into two camps. One party taught that the air was full of the germs or spores, which

disseminated disease, and that various vegetable and animal substances contained them in an inactive condition.

The other, with equal pertinacity, insisted that there was an inherent force or principle in everything which, under favorable conditions, would develop itself in organisms of one grade or another.

The controversy was carried on during the eighteenth century between such men as Spallanzini and Bonnet on one side, while Buffon, Needham and others argued in favor of what is often termed "Spontaneous Generation;" that there was a production of newly-organized beings, without parents, their original elements being from the organic material which took form by the operation of the principle of life which pervades everything. For many years these inquiries and controversies seem to have fallen into desuetude, but about the middle of the past century they have been resuscitated and brought forward with greater zeal than before.

The literature is of itself sufficient to fill a common medical library, and the conflict over the subject is as irrepressible and fiercely waged as though the existence of the universe was involved in the issue. Great names have been cited to sustain the doctrines, as well as names that have become great solely from advocacy of it without other particular merit. The former infusoria have given place to bacteria, vibrios and numerous races of cocci; then came bacilli, spirillae, and, finally, all merged into the all-embracing designation of microbe. Hoffman declared them vegetable growths, and made the attempt to classify them, so that the germ theory might have the claim to be called after modern usage, scientific. Dr. William Budd, of Bristol, England, appears to have been the first to promulgate the notion that infectuous diseases were caused by these low organisms invading the body.

This was in 1849; since that the endeavor to develop and propagate the "germ theory of disease" have been assiduous, until the hypothesis has almost become a dogma. Koch, in Germany, and Pasteur, in France, have expanded it and carried their conclusion to the verge of absurdity. They have given us the comma-bacillus for cholera, the anthrax bacillus, the micrococcus for tubercle, and various microbes for fevers, pneumonia, erysipelas, septicemia, etc. They profess to be able to transmit these various diseases by inoculation, and taking their cue from Jennerism have also proposed to arrest or mitigate them by infecting healthy persons. How these bacilli get into the body to do their deadly work has been the occasion of many a fine-drawn theory. It has been supposed that they are drawn in by breathing, also by means of the food eaten. They are said to get into the circulation by the thoracic duct, the pulmonary artery and the various glands. We seem to be hardly safe anywhere; we can neither eat nor drink, breathe the air or perform the common offices of life without mortal peril. Indeed, if this germ theory were true, the fact that the human race has existed on this earth for thousands of years would be incredible. Mankind would have been exterminated by microbes in two or three generations.

The dealers in proprietary medicines are taking advantage of this craze to advertise their wares. Germicides are offered for sale on every side; every new coal-oil fabrication is described as sure to kill bacilli.

The troops that were stationed at the quarantine station of New York in the late cholera scare, had a vivid sense of the absurdity of their employment. "We are here," they used to remark, "to catch the microbes." Dr. Joseph Thomas, after an exhaustive review of the theory, and setting forth of the numerous experiments by which it was sought to be verified, remarks, that in non-infected subjects no bacilli have been demonstrated at the supposed points of entrance into the circulation. This is very significant of the lameness of the theory. "The conclusions which have been drawn by Dr. Koch, and more so by his followers," says Dr. Thomas, "are exceedingly positive." But he adds: "Although the minds of so many individuals are positively made up as to their truth, yet, undoubtedly, it will be possible, only after a long time, to show their truth or falsity. Some of their conclusions are hardly warranted by their researches, and others seem unscientific; however, much of truth is contained in other inferences."

This statement expresses the attitude which the men sustain who are regarded as standard authorities: that the theory is plausible but "not proven." For one, however, I am convinced that no very long period will pass before sensible observers and reasoners in the medical profession, of whatever school, will regard this microbe mania as a mere "fad," one of the little systems that have their day and then exist no more. The fact that the same variety of microbe will occur in large quantities in the tissues and discharges, that they will produce a similar disease when transferred to other subjects, that they will do this when carried by "pure cultures" through several generations, though plausible arguments for the theory, are by no means conclusive.

It is a fact that more than one variety has been found in about every morbid condition which has been observed, and the observations thus far have not absolutely determined which shall be considered the mischief-dealer.

In regard to the production of disease by transferring microbes from one to another, there is reason to believe that it was not the microbes that created the new disease, but the poisonous material that was carried with them. In regard to what are denominated "pure cultures," the fact is that they are only relatively so. A portion of the morbid substance in which the microbes are found goes with them when cultivated, and it is just as proper for us to presume that that also as well as microbes is propagated. It is assumed that only the microbes, and not morbid matter that is with them, increases by the culture, but it is only assumption without proof. Professor Pettenkofer has been for many years engaged upon observations and experiments to determine the cause and mode of dissemination of the Asiatic cholera.

He first determined that the epidemic was diffused by the excreta of patients which had the baleful power of rendering other accumulations of excreta equally morbific and diffusive of the disease. The organisms were duly scrutinized and reported upon, but since the first investigation they seem to have passed out of notice and a new set have come upon the stage. In fact, the investigators seem to have had different results, leaving the friends of the theory as much in the dark as ever. Dr. Koch, traveling in the East, found the comma-bacillus in the water-tanks, and pronounced it the probable disseminator of cholera. It will live and grow in milk, serum or gelatine. Yet the success of his experiments has not much elucidated the matter.

Both Professor Pettenkofer and Professor Emmerich have been conducting a series of experiments. They have swallowed prodigious quantities of cholera bacilli without success. In their case the microbe was a total failure. They have been forced to the conclusion that local and not individual conditions engender the epidemic. The conclusion is a sensible one, and agrees with the teaching of the ablest of the old writers on pathology.

It was a great step when it was demonstrated that cholera was not the result of contagion; and it will be another when we become really intelligent and less given to conjecture upon the agency of these germs and microbes in the relation to diseases of any character. It is evident that disease is the outward manifestation of a disturbance of the physical economy, and that the peculiar organisms found in diseased and dead bodies are results of the condition and not the cause. The notion that cholera, small-pox, yellow fever, scarlatina, diphtheria, measles, etc., are contagious because they occur epidemically, is far from being a fact conclusively established. The occurring of a zymotic disease like scarlet fever or diphtheria in several cases in a family, or several families living near each other, no more shows it contagious than if they all had a common cold. Physicians attending such patients seldom contract their disease, or even convey it elsewhere. Nurses generally appear to be exempt. Indeed, there is often less mortality in a district where an epidemic is raging than at other seasons.

In regard to microbes I do not question their existence, but I do dispute the notion that they are sources of harm. It has been computed that a million of them exist in each drop of milk. The number in a gill or pint, at that rate, would be many billions. If they have any office,

it is to carry and sustain life and not to destroy it.

The same thing may be said of the innumerable invisible gnomes of the atmosphere; there is no good reason whatever for setting them down as foes to life; rather they are its sustainers. In the order of nature, every living thing is nourished from other living substances; we eat the fruits and seed of plants because these contain the highest life-forces, and so are best adapted to recruit our energies. If the various micro-organisms exist in the food we eat and the air which we breathe, then we are fairly warranted in believing that they are in some sense our sustainers, as nourishing our bodies and adding to our vital force; their office and agency are for our benefit and not to our harm.

True, there will be a demur on the ground that the fluids in the bodies of the dead are swarming with micro-organisms, and that the secretions of the bodies of the sick are infested with minute structures not found with those in health. These, it will be insisted, are the agents of infection. We question this very decidedly; because we find the worms of the charnel in the decomposing corpse and the numerous scavengers devouring the remains of a dead animal, we never infer that these creatures caused the death of man or animal. We only look upon them as agents in the wise provision of nature to remove what would be noxious and deadly from where it would endanger life. Many of these supposed agents of infection have no power to propagate their own kind. They are enabled, through warmth and moisture, to absorb oxygen energetically, and so to hurry fermentation to the fulfilling of its appointed function. They belong to the process of decay, and have no special agency to go beyond that. According to Karsten, "they appertain neither to the animal nor to the vegetable world, their mission being only to contribute to the promotion of putrefaction and disintegration like all septic bodies." They are only the companions of death. From the known facts of their natural history we are warranted in regarding them not as the seeds of fructification of special diseases, but as simply constituting material which, in combination with other fermentable substances, undergo septic and regressive actions somewhat like those of urea in combination with albuminates or plasma.

The so-called contagious diseases have been known repeatedly to break out as if spontaneously. There was, a few years ago in Russia, a sudden change in the weather to severe cold, and many thousands were taken down with influenza. The microbe was evidently very busy at that time, if one must be insane enough to interject the theory on that occasion. Small-pox has broken out again and again, even in mid-ocean, without any traceable source for infection. There are like records of scarlatina. Dr. Austin Flint declares that diphtheria is eminently an epidemic disease.

The celebrated Tresseau and Dr. Peters inoculated themselves for it without effect, and Dr. Peters went so far as to apply the virus to his throat. Florence Nightingale witnessed cases of small-pox at Scutari originating without contagion, and one disease merging into another. The late Dr. Carl Spinzig cites numerous cases which fell under his observation, and adds: "Such downright contradictions can not be consistent with the supposition that even a shadow of truth is in the doctrine of so-called infection.

"In nature there is no arbitrariness; all processes are the necessitated phenomena of the operations of unalterable laws; hence, simply from logical inference, the proof is obtained that there can be no infection, and, consequently, the occurrence of the so-called contagious disease is dependent upon a different cause, of which the laws are those that are common to all other phenomena."

With these sentiments I am in accord. I believe that atmospheric and epidemic conditions are essential causes for the prevailing of epidemic diseases. Where these conditions do not exist, or where they exist in only a qualified extent, there will be no epidemic.

The same conditions which develop a disease at one time will develop it at another, whether it be sporadic or epidemic, and the type will depend upon the climate and other conditions. Every epidemic, however like in classification to others, will always exhibit differences at

the various periods of recurrence. I believe, aside from the venereal and some skin diseases, as the itch, there are but two causes of disease. First, some internal ferment, producing some morbid material, and second, atmospheric conditions.

Surrounding physical causes determine the line of demarcation between healthful and morbid action, and by the energy of their operation in the respective season and at the respective locality, give to the prevailing epidemic its specific character. Small-pox, scarlatina and the other exanthematous diseases, generally pertain to cold weather; intestinal diseases, as a rule, are peculiar to hot climates and hot weather. Every season has its prevailing epidemic influence which rules the type of the complaints then prevailing, and when the season and the epidemic influence change, the diseases change with them. Such has been the history of the world. Even when the epidemics rage with the greatest apparent severity, only the weak, those the integrity of whose bodies is impaired, are liable to the attacks; those really healthy are very certain to go unscathed.

They need but to take heart and banish fear. To such an extent is this known to be the case, that it is becoming a common observation that during many epidemics the current complaints are prone to take a type analogous to that of the epidemic, and the aggregate of deaths is often actually less than at other periods. This is usually the case when small-pox is about, and it has been sometimes so when cholera prevailed. We have much to learn of the philosophy of epidemics and their office in the world, far, wide and remote from what has been supposed.

Before dismissing the microbes from their place in modern pathogenesis to their proper abode, it may not be amiss to note some of the absurdities which some of the microbiologists have let themselves entertain. A few years ago the wearing of the beard was denounced as affording a shelter and breeding-place for the germs. Doctors, it was said, were liable to carry diseases from house to house, from having domesticated microbes in their beards. This proposition proved too absurd for common patience.

Then came an onslaught upon kissing. If a mother caressed her babe, she was likely to set some microscopic rascal at its vitals. The young men and young women were also notified of the frightful perils of osculation. The girls were told of the virus, the contagious matter, the micro-organisms that were lurking on young men's lips. It seemed, however, to have excited curiosity rather than alarm. They could not well resist the temptation to know the good and evil. They generally seem to have found no other evil; no microbes or contagion, except that they were prone to the infection of a desire to repeat the experiment. The young men were also desperate enough to incur like risks. I forbear any attempt to speculate upon the matter, and the registrars of vital statistics have neglected to keep a record of the diseases engendered in this way. We are left to guess. It may be considered, however, as an unsuccessful matter. Nobody seems to have refrained from terror or caution; and the kissing epidemic seems to have raged with unmitigated violence all the year round. The kissing microbe has not yet yielded his ugly phiz to the microscope, and as far as we know the microbiologists are as reckless as others in exposing themselves to his ravages.

That life may originate *de novo* is neither so unphilosophic or problematic as may have been supposed.

Buckland has preserved the record of a race produced under the action of the galvanic battery, which subsisted, and even propagated, its kind.

If there is danger from carriers of contagion, whatever is in most general use should be avoided—and that is money—it is found in almost every place, handled by all sorts of people; by those afflicted with all kinds of disease; carried in filthy pockets; in the stockings of harlots; conveyed in every conceivable manner, and yet I have never known any of those microbists to refuse it; neither men in banks to be injured by it. I would propose, that to be consistent with their views, microbists reject it, and let those of us have it who are not afraid of these infinitesimal tramps. Earth has been brought from more than a hundred feet below the surface, covered with glass

and exposed to the rays of the sun, and in that condition produced vegetation. Indeed, when the trees of a particular character are destroyed in a forest, it is not unusual for a new growth to succeed wholly unlike the former.

If we consider the sun as the fountain of force, it can be no very great stretch of imagination to suppose that its active energy will incorporate itself with the various earths, and thus lead to the developing of new organisms and forms of life.

The same cause which has introduced into the universe must continue the benign influence, and creation thus be a matter of everyday occurrence.

This agrees with the account in the Book of Genesis: "Let the earth bring forth grass, the herb-yielding seed, and the fruit-tree yielding fruit after its kind, whose seed is in itself upon the earth." What has been in the order of the universe, always continues to be.

So with disease; it is as variable in form as life, and as likely to occur *de novo* when conditions promote it. A small-pox or fever will appear when the circumstances compel it, with no necessary specific poison other than what is incident in the case.

The nidus once established, it is liable to break forth in full energy.

If any question it, let them show that there was no first instance when the disease occurred; otherwise, however, plausible their reasoning may be, they beg the whole question at the beginning. Disorder is always incident to life, and once introduced will be liable to develop permanent conditions.

Such appears to be the rationale of the matter.

[Written for the MEDICAL BRIEF.]

Is Alcohol a Food?

BY J. W. LOCKHART, M. D.,
St. John, Wash.

It seems to me that the article by Dr. Dixon, on page 745, of the October number of THE MEDICAL BRIEF, under the caption of "The Action of Alcohol in Health and Disease," is worthy of more than a passing notice. In the first place his altogether gratuitous assumption that the "advocates of teetotalism" are the only ones who "believe that alcoholic beverages only make for evil" do not mark him as a man who wishes to publish a fair and unbiased opinion in regard to the matter. His statements seem not only to be biased but partake largely of the nature of special pleadings for interested parties.

For many years there has been no little controversy over the question of the physiological or pathological action of alcohol, and the discussion has been by no means one-sided, nor confined, on the one side, to the "advocates of teetotalism." The fact is, that in this country, at least, the advocates of total abstinence from alcohol as a beverage base their claims upon the statements and deductions of men who rank as high in the world of science as any that can be named, and whose opinions are not to be blown aside by a sneer at the "teetotalists."

As Dr. Dixon has presented a very one-sided view of the question, perhaps I may be pardoned for producing some important evidence on the other side, in order to refreshen memory and give the readers of THE MEDICAL BRIEF a chance to draw their own conclusions. Having conducted no experiments with alcohol, I will content myself by quoting from those who have, and who, on account of their confessed ability, have a right to be heard. First, then, I quote from Dr. G. H. Benton, Member of the American Society for the Study of Alcohol and Other Narcotics: "The many pathological degenerations of inebriety vary somewhat in proportion to the kind of liquors imbibed. If the drink is of the lesser concentrations of alcohol, such as beers, wines and ales, one will find more or less of the fatty degeneration in the early course, and less sclerosis; while the more concentrated forms, such as brandy, rum and gin, insure early sclerosis, and all forms produce acute and chronic gastric catarrh as one of the primary symptoms, together with cirrhosis or fatty degeneration of the liver, kidneys and heart, sclerosis and atheroma of the blood vessels, with shrinking and atrophy of both cells and nerve fibers and destruction of the dendrites." . . . "Alcohol, when introduced into the system, undergoes no digestive or other chemical change,

but is absorbed and circulates as alcohol. It coagulates the albumen with which it comes in contact. It absorbs water from the tissues. Its first impulse, therefore, on the circulatory system is contraction, but, secondarily, by its anesthetic effect, it paralyzes the vasomotor centers, vasodilation takes place, reducing the bodily temperature and requiring increased heart action." . . . "The direct action of alcohol is a protoplasmic poison. Its active affinity for water, albumin and oxygen, with which element it unites both in the blood and in the organized structures, especially its union with free oxygen in the blood, retards tissue metabolism. It increases the proportion of carbon dioxide and water. This lessens the bodily temperature and the sensibility of all nerve structures, cerebral, spinal and ganglionic."

Dr. Berkly, Johns Hopkins Hospital, Baltimore, is quoted as saying: "Alcohol in the system has a peculiar eroding action on the cells of the brain. At first this is confined to local centers, which increase, until finally a large part of the brain is involved."

The late Dr. Noah S. Davis, than whom no man was better entitled to speak on this subject, says: "Alcohol, when taken into the stomach in a pure and undiluted state, acts as a direct irritant poison, and is as speedily fatal as undiluted carbolic acid. When largely diluted, as beer, wine, whisky, brandy, rum and gin, it is rapidly absorbed without digestive or chemical change. It is carried in the blood current to every organized structure in the living body. . . . It nowhere undergoes assimilation or conversion into nutritive material for the growth or repair of the natural structures of the body. A careful analysis of all the facts obtainable not only shows that the presence of alcohol in the blood impairs every function, physical and mental, and every structure of the individual using it, but also extends the same impairing and degenerating influence to his or her offspring."

Dr. Max Kassowitz, University of Vienna, says: "Oxidation of alcohol in the blood neither involves any kind of physical force or energy, nor lessens the waste of nitrogenous elements, and consequently performs none of the function of a true food, either directly or indirectly, but favors the degeneration of almost every tissue. Alcohol is a protoplasmic poison and not a food, and under no circumstances can it act in a nutritive manner."

Dr. Winfield S. Hall, of Chicago, says: "Only such substances can be called food materials, or be employed as food, as, like albumen, fat and sugar exert non-poisonous influences in the amounts in which they reach the blood and must circulate in it in order to nourish." Of the sparing qualities of alcohol, he says: "I may say that these are very slight and their significance has been very much misunderstood by physiologists. They have generally thought that the consumption of tissue was decreased because of the oxidation of alcohol in a vicarious role, but it must be clear that the narcotic effect of alcohol, by decreasing activity, decreases oxidation of tissues. In this sense morphine and all other narcotics are foods."

Dr. Roeser, of Paris, said: "It is absorbed as alcohol, mixed with the blood, imbibed by the tissues and burned as alcohol, and the nervous excitation produced by the action of alcohol gives rise to the rapid combustion of the body reserves. Consequently, a substance which contributes nothing to the reserve tissue, which can be considered in no sense a source of physiological work, and gives rise to the development of a very small amount of heat—such a substance must be harmful, at least its utility is doubtful. It can not be regarded as a food."

Enough has been quoted to show that there are at least two sides to the question, and that argument is as logical on the one side as the other.

All agree that alcohol is not digested in the human stomach, while all true foods must undergo that process. All agree that alcohol is absorbed from the stomach and circulates in the body as alcohol. All agree that an uncertain per cent of alcohol is eliminated from the body through the kidneys, skin and lungs, while another some insist that an uncertain amount of it is oxidized in the body. All are, doubtless, to a certain extent, right in their opinions.

My own conclusions, drawn from no small amount of literature on the subject, is, briefly, this: Alcohol enters the sys-

tem as pure alcohol, unchanged by the digestive process. It has a well-known affinity for albumen and combines with it wherever the two substances come in contact, whether in the body or out of it. In the body these two substances unite, destroying, or at least greatly modifying the protoplasm from which all tissue cells are formed; and, also, part of the albumen of the blood, brain and nerves. This coagulated albumen or possibly an albuminate, acts only as a foreign substance perfectly worthless as a tissue builder or a heat producer. It is probably disintegrated and eliminated from the system in much the same way that other waste products are eliminated. This change in the brain and nerve substances, together with the foreign substances thus produced, is sufficient to account for all the symptoms of alcoholic intoxication, or poisoning, or alcoholism. All the functions of the brain and nervous system are benumbed and deadened in proportion to the amount of alcohol imbibed, while the symptoms are in ratio to the individual powers of self-control. This benumbing or narcotic effect of alcohol has given rise to the popular superstition that alcohol warms the body in cold, and cools it in warm weather. When the centers of locomotion are partially narcotized we see the staggering gait. When the centers of volition are partially narcotized we see the staggering intellect and the ineffectual efforts at coherency. This generally takes the form of more words and less sense.

Alcohol, by preventing normal cell metabolism, or the conversion of the protoplasm into normal tissue cells, compels the production of abnormal tissues, especially those depending on the carbohydrates for their elaboration. This theory satisfactorily accounts for the extraordinary accumulation of adipose tissue in constant drinkers, especially of beer, in which the alcohol, being more dilute and more constantly imbibed, produces a more constantly degenerating effect.

It is more than likely that all the alcohol not eliminated from the body through the kidneys, skin or lungs, is lost in its combination with the albumin and eliminated from the body as other waste products are eliminated.

If we are to regard alcohol as a true food simply because a small portion of it is, oxidized in the body, and regardless of the unconquerable, diseased-produced appetite, and the innumerable evils that follow its habitual use as a beverage, we must conclude, *a fortiori*, that all substances that can be oxidized in the body are true foods, regardless of their deleterious effect. This suggests the *reducio ad absurdum*. It is incumbent on the advocates of the theory to show that all substances capable of being oxidized in the body are true foods, or common honesty will compel them to admit that their theory is untenable.

I beg the editor's pardon for the length of this article, the interest and importance of the subject being my only excuse.

[Written for the MEDICAL BRIEF.]

Malarial Fever, Its History, Pathology, Symptoms and Diagnosis.

BY J. W. CRISMOND, M. D.,
Anderson, Ind.

Malaria, or paludism, is a subject that has occupied the medical mind since the days of Hippocrates, who, in his treatise on "Airs," attributes various diseases to a mixture of the blood with vitiated air. It has not been many years since this idea was as vigorously advocated by medical writers as in the time of Hippocrates; and, indeed, their teaching was not more rational.

I have often thought how misleading and unfortunate this idea was of attributing any definite entity to malaria, a contracted word, derived from the Italian *mala aria*, whose signification, from a medical point of view, means much or nothing. Bad air is made to cover a multitude of ailments, as well as a multiplicity of ignorance in the realm of pathology.

Vitiated air undoubtedly does lessen the resistive force of our bodies, and thereby render our system more susceptible to the encroachment of disease, but it is not the disease *per se*.

Is it not a fact that all diseases have their specific origin, and that the same cause will not change its identity by some

will-o'-the-wisp, and thereby produce a different disease, at the will of chance, but the same germ will always produce the same pathological condition.

Telluric intoxication, while faulty, is a better word than malaria, because it expresses more accurately the idea intended by the word malaria, namely, that certain diseases were produced by the action of air coming from soil, the energy of which is not expended upon vegetation. However, this term and the idea it conveys is rejected by a large number of medical men of the more advanced school of science.

Miasm, one of the many appellations for autumnal and vernal fevers, seems to be so thoroughly ingrafted upon the medical mind that it is almost impossible to disabuse the mind of the fact that "malarial fever" is not caused by "floating and impalpable morbific effluvia, the product of the decay or putrefaction of animal and vegetable substances." However unreasonable it may appear to some conservative students of the causation of disease, and however imperfectly established may appear the hypothesis that malarial diseases are caused solely by invasion of the body by a specific bacteria, this is the view of almost all modern writers on the subject.

The hardest thing for one to do is to cast off and get away from one's early training, to completely divest one's self of preconceived and time-honored opinions, which has been so zealously advocated, and so universally accepted as settled facts.

The first substantial proof of the bacterial origin of malarial disease is that produced by Professor Tommasi-Crudeli, of Rome (1870), and Professor Klebs, of Prague, who discovered a microscopic fungus in the lower strata of the air of a malarial region in Italy, and in the soil and stagnant waters, which they name bacillus malariæ. They found that this micro-organism, when cultivated in various media, and properly diluted, and injected under the skin of dogs, produced in them typical intermittent fever.

Before the ever-advancing tide of discovery old opinions and settled convictions give way to new ideas and uncontrovertible facts in their onward march.

We find this explanation of the causation of malarial fever supplanted, to a great extent, by Laveran, who first advanced the idea that there is always a peculiar organism (hematogeon) not found in any other disease.

This parasite has been carefully studied by Professor Osler and Professor Councilman, of Johns Hopkins University, and Professor Dock, of the University of Michigan. The clinical aspect of the different forms and phases of malarial fever are dependent upon and associated with the various forms and stages of the development of the plasmodium malaria.

Since the publication of Laveran's discovery, his observations have been confirmed and enlarged upon by many observers in all parts of the world, and while but little is yet known of the life of the organism, outside of the human body, its causative relation to malarial fever has been conclusively demonstrated.

Golgi (1885-86) proved the relation existing between the different stages of the malarial paroxysm and the cycle of the development of the parasite.

He demonstrated that there were two varieties of the parasites, as belonging each to quartan and tertian fever.

In 1889, Marchiafava and Celli recognized particular forms associated with estivo-autumnal fever.

Sternberg, in 1880, repeated the experiments of Kleb and Tommasi-Crudeli, in the vicinity of New Orleans. His labors failed to confirm that of Tommasi-Crudeli and Klebs.

Sternberg's conclusions are as follows:

"Later researches have also failed to confirm the supposed discovery of Klebs and Tommasi-Crudeli, and it is now generally admitted that there is no satisfactory evidence in favor of this view that micro-organisms of this class are concerned in the etiology of malarial fevers."

On the other hand, we have now very extended observations, which indicate that the blood parasite discovered by Laveran (1881) in the blood of patients suffering from various forms of malarial fevers, bears an etiological relation to fevers of this class.

This hematozoon belongs to quite a different class of micro-organisms. It is

more frequently spoken of at present as the plasmodium malariæ.

"Personal observation," says Professor Von Jaksch, "no less than the study of what has been written on the subject, have satisfied the author that the blood in malaria contains specific organisms, as Laveran first pointed out, and that these specific organisms are the determining cause of the disease."

Hehir, after careful investigations of the blood of malarial patients, in India, has concluded that there were constantly present in such blood eight different forms, including the phagocytes, which may be observed to take an active part in the morbid process.

Mode of Infection.—If the contention as to the etiology of malarial disease is well founded, there can be but one answer as to infection, and that is by inoculation.

It has been conclusively proven by inoculation experiments that infection may take place through the skin, and, in addition, that the different varieties of malarial parasites have each a more or less definite period of incubation, when infection is brought about in this manner. The insects that do the inoculation are most likely to be the mosquito.

The plausibility of the inoculation theory is very much enhanced when comparisons are made between malaria and other parasitic blood infections of man and the lower animals.

The tsetse-fly disease of Africa is due to a flagellata infusorium. The fly, by feeding upon an animal already infected, and then biting a healthy animal, will act as a carrier of the parasite from the infected to the uninfected.

The transmission of the Texas fever, which is due to a protozoon, is another good illustration.

Also, the *filaria sanguinis hominis* is carried from the sick to the well by the mosquito. The very various circumstances associated with the conditions under which malaria prevails that may be reconciled with the theory that the mosquito is an important factor in the transmission of the parasite.

Consider, for instance, the relative immunity possessed by those sleeping in the upper stories of a dwelling in malarious regions is susceptible of explanation by the limited extent to which the flight of mosquitoes is elevated above ground.

Further, it is well known that mosquitoes are unlikely to leave the region in which they were generated, and that as soon as a strong wind prevails they seek such shelter that the wind carries them for a limited distance only.

The name of the mosquito which is successful in inoculating persons is *culex penicillasis*, or the so-called *culex malaria*.

Symptomatology—Period of Incubation.—A certain time elapses after inoculation takes place, and this period of incubation varies from a few hours to many days, before there is any manifestation of disturbance in the functions.

No definite period has, as yet, been fixed at which the malarial explosion takes place, the variations being due to the intensity of the poison, susceptibility, and the resistive force of the individual. The average is stated to be about fourteen days.

In a large proportion of cases there are symptoms indicating the plasmodium malariæ are developing in the blood in two to four days after infection.

This is termed the prodromal stage of the disease.

The affected one experiences a feeling of lassitude and weariness, there is backache and general muscular soreness, an irresistible desire to yawn and stretch, and especially is this so in the early morning and on cold, damp days. He complains of headache, his tongue is coated, his stomach is squeamish, and, as evening comes on, his skin becomes warm and dry, his sleep is more or less disturbed by dreams, and, as morning approaches, will usher in a profuse sweat.

In another class of cases the prodromes consist merely in a coated tongue, icteric, sclerotic, and a general yellowish hue of the skin, languor, loss of appetite, and constipation; the urine is loaded with bile-pigment, and deposits an abundance of urates.

The patient may gradually drift into fever, or the disease may begin abruptly in the midst of apparently full health. Intermittent fever occurs in paroxysms, separated by intermission or non-febrile periods.

The paroxysms may recur daily, constituting the quotidian form, or alternate days, the tertian form, since it recurs on the third day. There is also a quartan form; exceptionally there may be a double quotidian, with one strong and one mild attack each day; a double tertian, with a daily onset, that of every second day being relatively weak; a double quartan, having two attacks in every three days.

Febrile paroxysms usually recur at a definite hour each day or alternate day. Recurrence of successive paroxysms, at an earlier hour for each attack, is termed anticipating, and indicates an increasing malarial influence. When the paroxysms come at a later period, with successive attacks, it is termed postponing or retarding, and indicates a subsidence of the malarial influence.

Clinical Types.—Malarial fevers are divided into two main groups: First, the fevers due to infection with ordinary tertian and quartan parasites of Golgi. Second, the fever due to infection with the estivo-autumnal or crescent-forming parasite.

Under these two main groups, which may also be termed, respectively, the regularly intermittent fevers and the more irregular, often continued or subcontinued fevers, may be differentiated three types of fever:

1. Tertian fevers;. single and double infections.

2. Quartan fever; single, double and triple.

Both types comprising the first group of fevers.

3. The second group of fevers; the estivo-autumnal.

Tertian fever is of common occurrence in almost all malarial districts. The quartan type, while the common fever in a few malarial regions, such as Sicily, is, in most regions, where other varieties of infection are common, of rare occurrence.

Tertian Intermittent Fever.—In this form of fever the infection is with a single group of tertian parasites, each individual member of which is in approximately the same stage of development; so that segmentation of all, with which the paroxysm is associated, takes place at about the same time.

The time necessary for the completion of the cycle of development of the tertian parasite is about forty-eight hours, sometimes a little more, sometimes a little less, the latter more commonly than the former.

The paroxysm may be divided into three stages: the chill, the fever, and the sweating stage.

Unpleasant feelings, ill-defined sensations of discomfort, usually precede the chill, and in an individual who has ever experienced a malarial outbreak, are peculiarly significant of what is to follow. Even at this time some elevation of the temperature may be noted, while the surface of the body is cold, and the skin, owing to the erection of the hair-follicles, presents the condition of goose-flesh; the internal temperature, as determined in the rectum, is high, often 105° or 106° F. The skin is pale, often bluish in color, and the visual disturbances, headache, dizziness, nausea, and vomiting, are common. The pulse is tense, small, and accelerated. The duration of the chill is variable, usually from ten minutes to half an hour, or an hour, or even longer.

The febrile stage gradually supervenes upon the stage of chill, until by repeated flushes of heat, the stage of chill is completely superseded, and the patient throws off the additional bed-clothing which, a short time before, was so gratefully accepted.

The skin becomes hot, dry, and reddened, and a sense of burning heat is complained of; the conjunctivæ are suffused, the pulse rapid, full and bounding; intense headache, dizziness, and, occasionally, delirium occurs, or the patient may be drowsy and somnolent.

Epistaxis, diarrhea and vomiting are among the less frequently occurring symptoms.

Herpes of the lips and nose, while erythema and urticaria are sometimes seen.

In most cases the splenic tumor may be readily detected.

The duration of this stage is usually four or five hours, and the temperature now attains its greatest elevation.

With the initiation of the sweating stage the patient experiences great relief. At first perspiration is noticed to occur about the forehead and upon the face, but shortly spreads over the whole body, usually becoming most profuse.

The temperature rapidly falls, so that in two or three hours it has reached a subnormal point, where it remains for some time. The patient now sinks into a refreshing sleep.

The intermission continues until the young parasites derived from the segmentation that has caused the first paroxysm, in their turn pass through their cycle of development until the stage of segmentation is attained, and with it occurs the second paroxysm.

The time thus occupied is forty-eight hours, longer or shorter, resulting in anticipation, or retardation of the paroxysm.

During the intermission, the temperature remains subnormal for some hours, and the patient experiences great relief.

Quotidian intermittent fever is the result of two groups of tertian parasites, which is found in the blood of these patients in different stages of development, which reaches maturity, or the stage of segmentation, upon alternate days. This gives birth to the quotidian or daily paroxysms peculiar to single tertian infections.

Because one group may be larger than its congener at the time of inoculation, it is not uncommon for the paroxysms to be tertian in type until the smaller group has attained sufficient size to cause a paroxysm.

As one group may be greater in number, it is not uncommon for the paroxysms produced by this group to be of greater severity than those produced by the lesser group.

The usual order of segmentation is for it to occur at a different hour from each other, and this accounts for the onset of the paroxysms at different hours.

There is no difference in the paroxysm in the quartan fever from that of the tertian fever.

About seventy-two hours is required for the completion of the cycle of development. The coincident paroxysms and segmentation of the parasites occurs every fourth day, and an intermission of two days existing between.

The exacerbation marked by three stages of rigor, fever, and diaphoresis, of an average duration of about ten to twelve hours.

The characteristic of this type of fever is to occur with great regularity, and to show very little tendency toward retardation.

Double-quartan fever occurs when two groups of quartan parasites exist in the blood at the same time, and attain the stage of segmentation upon successive days.

The exacerbations which take place upon two days in succession, is followed by a day of intermission or rest.

We also have triple-quartan infection, and this is due to the existence in the blood of these groups of quartan parasites, in different stages of development, and segmenting upon successive days.

Here we have daily exacerbations, coupled with all of the phenomena of quotidian intermittent fever.

The Spleen.—The spleen is always involved in malaria. It is enlarged, but its hypertrophy varies in degree. Its firmness or solidity is diminished, often so much so that an attempt to dislodge it results in rupture of its tense capsule, which gives vent to its dissolving pulp.

The parenchyma is frequently the seat of a melanosis, varying in intensity from a dark brown to almost deep black.

The incised surface presents a dark gray-brown or slaty color, and the unpigmented. Malpighian corpuscles stand out prominently. The capsule is very thin and easily lacerated. The venous sinuses are dilated, as is revealed by the microscope.

In the parenchyma is crowded a prodigous number of red blood-corpuscles which, to a great extent, is found to contain parasites in all stages of development, and sometimes free parasites are to be found.

One of the marked characteristics is the presence of a large number of phagocytes, particularly the macrophages. White leucocytic phagocytes occur, especially the large-cell variety, which exist in very large numbers.

The peculiarity of the protoplasm cells is seen to contain pigment-granules, in

clumps or rods, as well as parasites free or included within their corpuscular host. The parasites seem to complete their cycle of existence while within the macrophages.

The Liver.—The liver is more or less enlarged and congested, and contains a large amount of dark slate-colored pigment, often almost black.

The capillaries, hepatic artery, portal vein, and hepatic vein, when viewed microscopically, are found to contain myriads of parasites.

The branches of the portal vein contain the very largest macrophages, which have originated in the spleen, and which, on account of their large size, obstruct the caliber of the vessels.

The Kidneys.—In the glomeruli, the cortex, and along the course of the vessels in the pyramids, pigmentation may be observed, especially in the glomeruli, and pigment being contained within large leucocytes, which may produce a narrowing of the caliber of the vessels.

Degeneration and desquamation of the epithelium of the corpuscles of Bowman constitute one of the most serious lesions. In hemoglobinuric, or black-water, fever, the change in the kidneys are most marked. The kidneys usually increase in size, of somewhat lessened solidity, and of mixed color, being often pale and anemic in appearance, and at times they are a darkened color.

There are observed scattered brownish spots, due to pigment deposits, which crowd the epithelium and lumina of the uriniferous tubules.

Upon microscopical examination, the renal epithelium is found to contain pigment, and pigment-rodlets, or fine yellow granular, or dark, amorphous masses, are observed to fill the lumina of the uriniferous tubules.

The Brain.—There is usually a distinct localization of the infected blood-corpuscles which appear to take in the cerebral capillaries, and then melanotic discoloration of the cortex may occur, with deep injection of the blood vessels, and, not infrequently, numerous punctiform hemorrhages.

Parasites in all stages of development, although one stage usually predominates, crowd the cerebral capillaries until, in places, complete obstruction or thrombosis of their lumina takes place.

These parasites, although commonly seen to be within red-blood corpuscles, may be free, or contained, together with pigment or blood corpuscles, within phagocytes.

The Bone Marrow.—The bone-marrow is of brown-red color, sometimes almost black. It is soft, almost diffluent.

The vessels are found to contain developing, as well as sporulating, parasites, and crescents are usually present in abundance. About the periphery of the lumina of the vessels macrophages containing pigment may be found in considerable numbers.

Diagnosis.—The diagnosis of malarial fevers depends upon the result of the examination of the blood, and the more doubtful the case the more it resembles some other affliction, the more necessary is the resort to this means of attaining a positive conclusion.

To a less degree, the diagnosis is established by the results of the therapeutic test: The administration of quinine and the clinical manifestations.

Celli and Guarnieri obtained excellent stained specimens of the parasite in fresh condition, by mixing the blood with ascitic fluid deeply tinged with methylene-blue.

It may be prepared thus: Methylene-blue is dissolved in normal saline solution until the fluid is somewhat deeply colored. The solution is then filtered, sterilized, and set apart in small quantities in thoroughly-sterilized test-tubes. The point of the finger is then carefully cleaned, a drop of the staining fluid applied to it, and through this the finger is pricked with a needle.

The flowing blood, mixed with the staining fluid, is brought in contact with a cover-glass, and this is placed preparation-side downwards upon a slide and examined.

The preparation must be spread in a very thin layer, and it is, therefore, necessary to guard against evaporation.

This may be done by sealing the edge of the cover-glass with paraffin wax.

It may be examined first with a fairly-wide aperture of the diaphragm, and afterwards with an open condenser, and a good oil-immersion lens.

[Written for the MEDICAL BRIEF.]

Water the Cure-All—The Modern Medical Treatment Which Replaces Drugs.

BY J. WATERLOO DINSDALE, M. D.,
Prescott, Arizona.

A great number of every-day little illnesses, and for that matter, many important ones, have their remedy or antidote always at hand. And it is a pity that the efficacy of that remedy is not more generally recognized, seeing that it is within the reach of everyone.

This wonderful agent, which almost might be called a panacea, is simply water, used intelligently.

The chief great advantage that water has over drugs is that it acts directly on the body, whereas the body usually acts upon the drug, attempting to rid itself of it.

Its great action is upon the superficial or outside little blood vessels, which either by expanding and so becoming flooded with blood, or else by contracting and so driving the blood into organs under the skin in the region to which the water is applied, set right the temporarily impaired mechanism.

Palpitation of the heart is a very unpleasant and sometimes terrifying affection. Very frequently it is not associated with any important, serious disease of the heart, but, nevertheless, it may cause grave discomfort. Which is the better, then: To send off post-haste for a physician to administer drugs, or to lie down quietly and apply cold water bandages over the heart? In a few moments this simple remedy will slow the heart's action to normal.

In the same way the skin over the liver is associated with that organ. Cold water applications over the skin of this part cause the vessels to contract, whereas hot water bandages dilate the vessels of the organ. Therefore the blood can be forced on if the liver is congested, or if blood is needed in that organ it can be brought there by these simple means.

The same thing applies to congestion of the kidneys. A hot bath will bring the blood racing to the spot, and the kidneys will be thoroughly flushed by the only real healing agent, the blood.

When a man faints, and is lying quite helpless, the old-fashioned person who wishes to dash a little cold water in the patient's face is too often nowadays shouldered aside by the up-to-date amateur physician, who knows all about the heart-stimulating properties of brandy, whisky, etc. There is no doubt that in certain cases fire water is a very useful heart stimulant, but for a simple faint they are always unnecessary.

In an acute fit of indigestion such as this in an ordinarily healthy stomach, are drugs, pepsin, and other digestive ferments necessary? No, assuredly not. A hot application over the stomach, followed by a cold application and abdominal massage, will afford immediate relief.

Almost every organ in the body can be reached by water applications, hot or cold, as the case may be, and the only knowledge necessary for their intelligent use is whether the blood supply of the organ needs to be stimulated or retarded.

In acute sore throat, tonsillitis, or any acute inflammation of the mucous membrane of the throat, wet packs made by folding a towel into four thicknesses and wringing out in very hot water, and then covering with a woollen wrapping, are very effective in relieving pain and reducing inflammation. A head-pack is useful for headaches of nervous origin, or caused by cerebral anemia, when there is an insufficient supply of blood to the head. In these cases wrap the head in a towel wrung out in ordinary cool water, and cover with a dry, thick woollen cloth. This may remain on for hours.

If, on the other hand, the headache is caused by congestion of the blood vessels of the head, the towel should be dipped in as cold water as possible, and should not be covered by any wrapper. Evaporation (and so cooling) should be encouraged, and the towel should be renewed as soon as it becomes warm. A wet pack is often very useful for the pain of sciatica, or for lameness after over-exertion and sprains.

Spinal tenderness and inflammatory rheumatism:

1. The amount of vitality destroyed by the fear and dread of passing through an operation, with the operation combined, often puts cases beyond hope, that could easily have been cured if the right treatment had been given.

2. To cut into the deep tissues of the body makes a severe wound in addition to the present existing trouble. The amount of vitality required to heal such a wound draws heavily on the vital force of the patient already over-taxed.

3. The anesthetic usually administered under such circumstances still further reduces the vital force of the patient.

4. The pain and sickness caused by the operation has a similar effect. Any one of these detrimental influences are often sufficient to cause the death of a very weak patient. *It is an appalling fact that actual murder is often committed by performing needless surgical operations and giving poisons as medicine.* Every one, whether layman or physician, who holds in his hands the life of a human being, should seriously consider what an awful thing it is to give a drug. The tendency is to kill, while trying to cure. To say the very least, it is an exceedingly contradictory and an unreasonable act.

Questions Presented by the State Medical Examining Board of Washington, at Seattle, July 2, 3 and 4, 1907.

SURGERY.

1. Give two methods of treating hydrocele of the testicles surgically, and briefly state the details of one.

2. Give the symptoms and treatment of fracture of the middle third of the femur.

3. Make a diagnosis of chronic suppuration of the antrum of Highmore. What is the treatment?

4. Give the treatment of large varicose ulcers of the leg.

5. What are the cardinal symptoms of fracture of the base of the skull?

6. Give in detail the treatment of a gunshot wound of the chest traversing the pleural cavity, with hemothorax compressing the lung.

7. Give, in detail, your treatment of hemorroids. Give the method of operation, and your reason for selecting the same.

8. Give your management of a man sixty years old, with an enlarged prostate, unable to urinate without the use of the catheter, otherwise physically sound. If you would operate, state why, and give the details of the operation.

9. Give the treatment of the various stages of a tubercular knee.

10. Upon the presence of what symptoms in one suffering from gall-stone disease would you base the necessity of an operation? Give a brief synopsis of such an operation.

PREVENTIVE MEDICINE AND MEDICAL JURISPRUDENCE.

1. What precautions would you employ to prevent the spread of (*a*) typhoid fever, (*b*) tuberculosis, (*c*) tetanus, and (*d*) malaria?

2. Name five disinfectants in the order of their potency and usefulness, strength of each used, and their composition.

3. Give two satisfactory methods of disposing of sewage.

4. Mention the parasitic diseases that may be communicated to man by food.

5. Give details for policing a camp, including sterilization of water and disinfection of excreta.

6. Differentiate between suffocation, strangulation, hanging and drowning.

7. Give data upon which an opinion is formed as to the length of time which has elapsed since death.

8. What precautions should be observed when taking dying declarations? When do dying declarations become admissible as evidence?

9. How would you prove by a *post-mortem* that a woman had recently been pregnant?

10. How would you determine a dead babe was not full-term?

OBSTETRICS AND GYNECOLOGY.

1. Define pelvimetry. What measurements obtained thereby should determine interference?

2. Give the objective signs of pregnancy in the order of their appearance, and state their relative value.

3. Give the differential diagnosis between pregnancy and pelvic tumors.

4. Give a brief description of the mechanism of normal labor.

5. What are the varieties and importance of perineal lacerations?

6. With what are sarcoma and carcinoma of the body of the uterus most likely to be confused, and how is the differential diagnosis made?

7. Name three varieties of extra-uterine gestation. Which is the most common and how diagnosed?

8. Give the diagnosis and treatment of ovaritis, both acute and chronic.

9. Define the term "uterine polypus," and state the varieties usually recognized in gynecology.

10. Describe the marks that exist upon the head as discovered by digital examination in the various occipital presentations, and their relative positions that would lead you to make a diagnosis of the presentation.

HOMEOPATHIC MATERIA MEDICA.

1. Give key-note symptoms of hyoscyamus, lycopodium, ignatia, sulphur and natrum mur.

2. Differentiate the heart symptoms of digitalis, kalmia, cactus grand. and spigelia.

3. Describe an arsenical album patient.

4. What are the indications for the following remedies in hemorrhage: (*a*) china, (*b*) ipecac, (*c*) trilliub, (*d*) erigeron.

5. What remedies are indicated in diphtheria? Give indications for each one mentioned.

6. Differentiate phytolacca and kali bich. in angina faucium.

7. Differentiate between aconite, belladonna, arsenicum alb., in fevers.

8. Give four remedies of use in diarrhea, with their characteristic symptoms.

9. What conditions indicate hypericum, arnica, rhus tox., in injuries?

10. Describe in full a natrum mur. patient.

ANATOMY AND PHYSIOLOGY.

1. Describe the method of locating the fissures of Rolando, and the parieto-occipital by extracranial measurement.

2. Give a brief description of the hip-joint, and name the ligaments and muscles that are concerned in its motion.

3. Give all the muscular attachments to the humerus, indicating the anatomic location of each.

4. What structures form (*a*) Hunter's canal, (*b*) popliteal space? Give the contents of each.

5. What are the branches of the first, second, third and fourth lumbar nerves.

6. Name the muscles of inspiration and expiration. Give the attachments of each.

7. Answer the following points in reference to the occipital bone: (*a*) angles, how many and what are they? (*b*) articulations; (*c*) lines, name muscular attachment of each; (*d*) processes, name the muscular attachments of each; (*e*) protuberances; (*f*) sinuses, how many and how formed? (*g*) fossæ, what lobes of the brain lie in each; (*h*) foramen, transmitting what?

8. Name the branches of the following arteries : (*a*) axillary, (*b*) radial, (*c*) internal iliac.

9. What are the sources of calorification in warm-blooded animals?

10. Name the secretions and excretions of the body, indicating which are alkaline, and which are acid in reaction.

11. What are the origin, uses and most important purposes of lymph and chyle?

12. Briefly indicate the action of the salivary, gastric and intestinal secretions on meats, starches and sugars.

13. Compare the general properties and composition of human and cow's milk.

14. Briefly describe the mechanism of the special senses of touch, olfaction, gustation, vision, audition.

ECLECTIC MATERIA MEDICA.

1. What are specific medicines?

2. Give your reasons for being an Eclectic. Wherein does it differ from the regular?

3. Name ten agents that influence the nervous tissues.

4. Define tonics and name six.

5. What are the indications for (*a*) gentian, (*b*) lupulin, (*c*) podophyllin, (*d*) zanthoxylin.

6. What remedy would you employ in rheumatism of the joints?

7. Name six diuretics and give the indications for the use of each.

8. Give the treatment for a case of pneumonia, and give your reason for the agents used.

9. What is a stimulant? Can an agent be a stimulant in small doses and a narcotic in large ones? Is alcohol a stimulant?

10. When would you use (*a*) galium aparine? (*b*) epigea repens? (*c*) leptandra virginica? (*d*) euonymous atropurpuretus? (*e*) apocynum and rosæmifolium? (*f*) hydrastis canadensis?

HISTOLOGY, PATHOLOGY AND BACTERIOLOGY.

1. Give the histologic structure of the mammary gland.

2. Describe the histology of the solitary glands of the intestines.

3. Name the various kinds of epithelial cells, and the location of each.

4. Give the histology of bone.

5. Give the pathologic appearance, gross and microscopic, of cancer of the breast.

6. Name the different tissues subject to tubercular infection.

7. In case of an infection of the finger, name the pathologic steps of secondary general infection.

8. What are the pathogenic germs? Give three examples.

9. What bacteria normally exist in the intestines?

10. Describe the appearance of tubercule bacilli and gonococci.

NERVOUS DISEASES AND DISEASES OF THE EYE AND EAR.

1. Give the diagnosis, prognosis and management of locomotor ataxia.

2. Locate the lesion of aphasia.

3. Differentiate grand-mal, hystero-epilepsy and Jacksonian or focal epilepsy.

4. Differentiate between paralysis agitans and chorea.

5. Give the etiology, symptoms, diagnosis and treatment of epidemic cerebro-spinal meningitis.

6. Give the management of acute ulceration of the cornea.

7. Give the etiology, symptoms and diagnosis of plastic iritis.

8. What is dacryo-cystitis? Give the diagnosis and treatment.

9. Give the method of extracting foreign bodies from the auditory canal.

10. What is the indication for paracentesis of the tympanum? Give the technique.

CHEMISTRY AND TOXICOLOGY.

1. Describe in detail a method of making hydrogen. Give the formula and equation.

2. Distinguish by chemical tests starch from sugar.

3. How do each of the following affect litmus paper: (*a*) blood, (*b*) urine, (*c*) saliva, (*d*) H_2SO_4; (*e*) NH_4OH?

4. From what natural sources are derived (*a*) phosphorus, (*b*) chlorine, (*c*) iodine?

5. Why are eggs administered in corrosive sublimate poisoning? What new compound is formed?

6. Discuss ptomaine poisoning.

7. Describe the difference between chemical and physiologic incompatibility. Illustrate.

8. Give chemical name for (*a*) Rochelle salts, (*b*) Glauber's salts, (*c*) oil of vitriol, (*d*) blue vitriol, (*e*) sal-soda, (*f*) copperas.

9. Differentiate between opium poisoning and alcoholic narcosis.

10. What is the chemical composition of gall-stones?

MATERIA MEDICA AND THERAPEUTICS.

1. Name (*a*) three drugs that dilate the pupil, (*b*) two that contract it.

2. How is calomel abstracted from the gastro-intestinal tract? Give the method of administration to produce catharsis and systemic effect, and precautions that should be taken.

3. How do the following drugs act as diuretics: (*a*) digitalis, (*b*) caffein, (*c*) calomel, (*d*) diuretin, (*e*) acetate of potash, (*f*) spiritus etheris nitrosi?

4. Name four drugs that should be administered during pregnancy.

5. Name the methods of producing local anesthesia and explain the physiologic action of the same.

6. Write a prescription containing three ingredients each, for fever, cough, and diarrhea, and the indications for each drug.

7. Name the therapeutic use of water and methods of using the same.

8. Describe the physiologic effects of phenacetin.

9. Give the doses for various purposes of (*a*) plumbi acetas, (*b*) cupri sulphas, (*c*) ferri sulphas, (*d*) argenti nitras, and (*e*) bismuthi subnitras.

10. Give four diaphoretics and give dose of each.

PRACTICE OF MEDICINE AND DISEASES OF CHILDREN.

1. Give the cause and symptoms of general arterial sclerosis.

2. What is myocarditis? Give the etiology, symptoms and prognosis.

3. (*a*) What is emphysema of the lungs? Of what is it usually a sequel? (*b*) What is bronchiectasis? Of what is it usually a sequel?

4. What is cirrhosis of the liver? Give the symptoms.

5. Give the diagnostic symptoms of incipient tuberculosis of the lungs.

6. Differentiate between typhoid and malarial fever.

7. Give the subjective and predisposing symptoms of cancer of the stomach.

8. Describe the pulses in the following conditions: (*a*) apoplexy, (*b*) exophthalmic goitre, (*c*) typhoid fever, second week and fourth week, (*d*) pneumonia in various stages, (*e*) double aortic murmur, (*f*) mitral murmur, and (*g*) various stages of consumption.

9. Give the symptoms, prognosis, and treatment of infantile scurvy.

10. Name the exanthemata. Give the symptoms and treatment of one of them.

11. Describe a rachitic child, and give the treatment for the disease.

12. Give the complications of scarlet fever, diphtheria and measles.

13. Given a child fed on modified milk, constipation and curds in the stools, what changes would you make in the preparation, and why?

14. How many forms of icterus are seen in the newly-born child and upon what do they depend?

15. Name two kinds of croup, and give the appropriate treatment of each.

Report of Board of Medical Examiners of Maryland—Questions at the June (1907) Examinations.

ANATOMY.

1. Describe the frontal bone, including its articulations and sinus.

2. Name the branches, and give the relations of the external carotid artery.

3. Give relations of liver. Name lobes of liver.

4. Name structures severed by amputation through middle of leg.

5. Name and locate ventricles of brain.

6. Name the form of inguinal hernia, and give the difference between them.

SURGERY.

1. Give the cause and treatment of external hemorrhoids—(*a*) palliative, (*b*) one operative method.

2. What are the indications for operative treatment in any form of hernia?

3. What are the signs and symptoms, and what is the surgical treatment of a purulent effusion into the knee joint?

4. Give in detail the treatment of a recent compound fracture of the middle third of the tibia.

5. Give the differential diagnosis between acute inflammation of the middle ear and mastoiditis.

6. Give the evidences and treatment of a wound penetrating the bladder.

PATHOLOGY.

1. Name the organisms most frequently associated with each type of pleurisy, and give in detail the method of staining of each organism.

2. Define thrombosis, embolism and infarction, and name the organs in which infarction most frequently occurs.

3. Define sarcoma and carcinoma. Give the various types, and the chief avenues of extension of each, and name the sarcomata in the order of their malignancy.

4. Define the term general anasarca, and give a gross pathological description of the lesion which usually gives rise to it.

5. Name the varieties of meningitis from a bacteriolgical standpoint, and describe the elements you would expect to find in the fluid from a case of the epidemic variety.

6. Give the gross pathology of amebic dysentery. Describe the organism giving

rise to it, and name the pathological condition of the liver often associated with it.

OBSTETRICS AND GYNECOLOGY.

1. Give treatment for case of placenta previa.

2. How would you manage a twin labor, one foot of each child presenting?

3. Diagnosis and treatment of ovarian cyst.

4. How would you treat a case of gonorrheal conjunctivitis in an infant?

5. What treatment would you adopt in a case of umbilical hernia in an infant?

6. How would you manage a posterior shoulder presentation?

PRACTICE.

1. Define (*a*) myxedema, (*b*) chlorosis, (*c*) tinea circinata, (*d*) enteritis, (*e*) tabes dorsalis.

2. Differential diagnosis between (*a*) hysteria and epilepsy, (*b*) cancer and ulcer of the stomach.

3. Give signs of arteriosclerosis.

4. Give symptoms of Graves' or Basedow's disease.

5. Give differential diagnosis between varicella and varioloid.

6. Give treatment of (*a*) uremia, (*b*) empyema, (*c*) pertussis.

CHEMISTRY.

1. Define the terms dialysis, osmosis, crystalloid and colloid.

2. Give the chemical name for cooking (baking) soda and washing soda, respectively, and state the general properties of each.

3. What, chemically, is glycerine? Give its chemical composition (formula). State its usual source, and give its general properties.

4. Give in detail two reliable dissimilar tests for the detection of sugar in the urine.

5. Give the chemical composition (formula) of urea; state the usual amount excreted in twenty-four hours, and give in detail a reliable method for its quantitative estimation.

6. Give in detail a reliable test for the estimation of the total acidity of a specimen of gastric contents.

MATERIA MEDICA.

1. Name the mineral acids, and give the dose of each.

2. What are the preparations of the phosphates, and their doses?

3. What are the official preparations and doses of iodine, and the iodides?

4. What are the official preparations of ergot, and their doses?

5. Give the official preparations and doses of nux vomica and its alkaloids.

6. What are the principal direct and indirect emmenagogues?

THERAPEUTICS.

1. What are the physiological effects and therapeutic uses of hyoscyamus and its alkaloids?

2. Give the physiological action of nitroglycerin, indications and contraindications for its use.

3. What do we understand by the term alterative, and name the principal drugs of this kind.

4. Describe in detail the treatment for tapeworm.

5. How do disinfectants act? Name the principal ones.

6. Define local and general anesthesia. Name means and method of producing, and sources of danger.

PHYSIOLOGY.

1. What portion of the gastro-intestinal tract accomplishes the greatest amount of absorption? (*b*) State what class of substances are absorbed in the stomach, small and large intestines.

2. What are the sources of oxygen and carbonic-acid gas in the system? (*b*) What is the effect of each upon the blood? (*c*) What is the average quantity of oxygen in venous and arterial blood? (*d*) What are the symptoms of insufficient oxygen in the blood?

3. Explain the effect of muscular activity upon amount and character of metabolism of body, and the influence upon this metabolism of variation in the composition of the diet.

4. What are ptyalin, pepsin and pancreatin, and in about what proportion are pepsin and pancreatin found?

5. Describe the condition known as apnea.

6. What becomes of the biliary salts which are constantly poured into the upper part of the intestinal canal? Give test for biliary salts.

Book Notices.

GYNECOLOGY AND ABDOMINAL SURGERY. Edited by Howard A. Kelly, M. D., F. R. C. S. (Hon. Edin.), Professor of Gynecologic Surgery at the Johns Hopkins University; Gynecologist to the Johns Hopkins Hospital, Baltimore. And Charles P. Noble, M. D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia; Surgeon-in-Chief, Kensington Hospital for Women, Philadelphia. Illustrated by Hermann Becker, Max Brödel, and others. In two large octavo volumes. Vol. I. has eight hundred and fifty-one pages, with four hundred and five original illustrations. Philadelphia and London: W. B. Saunders Co. Price, per volume, cloth, $8.00; one-half morocco, $9.50.

Gynecology, which is so closely associated, in many ways, with abdominal surgery, is an important and deep subject to consider. Of course, when such practical men as Dr. Howard A. Kelly and Dr. Charles P. Noble undertake the task of producing a work on this subject, we know that the latest and best that could be said will be found on its pages, and by eliminating the text-book matter on the subject, they have been able to confine this work to two large volumes of original matter, so they should be read by all who take an interest in gynecology and abdominal surgery. We believe that this is the first time that these studies have been so closely associated. From the standpoint of surgical gynecology it is important, as other works have been written on medical (or non-surgical) gynecology. The authors say, concerning the relative advantages of the abdominal and the vaginal route, for the performance of various operations there are still divided differences of opinion. Here we have presented the claims of the two schools, from the affirmative standpoint, by selecting tried advocates to present each side; therefore the reader may make his own deductions, aided by the master minds in the editorial work of the authors. It is readily seen by the examinations of the graduates of the different schools before the State boards, that gynecological work has the largest percentages. This shows the great and increasing interest taken by students along this line of study.

THE NEGRO, A Menace to American Civilization. By R. W. Shufeldt, M. D., Major Medical Department, United States Army (Retired). Member the National Geographic Society; Cor. Member Societa Italiana d' Antropologia, Ethnologia, e Pricolgia Comparata, Florence, Italy; Member l'Alliance Scientifique Universalle de France, etc. Boston: Richard G. Badger, publisher.

We can not state the reasons Dr. Shufeldt gives for writing this work better than given in his introduction to the work: "When one comes to write a book upon such a subject as is treated of in the pages of the present volume, there is usually some very definite reason that inspires the undertaking. This was distinctly the case in the present instance, and apart from all other considerations, be their nature what they may, my object in publishing a book on the negro race as it is now represented in this country, has been for the sole purpose of pointing out, from a purely scientific viewpoint, the effect that these introduced Ethiopians have had upon our progress and civilization in the past and what their continued presence among us means in the future." The fact is that the unmixed African in this country is just as much a negro today as his ancestors were before him in Africa, but the great danger that is assailing American civilization is the intermingling of the blood of a pure white race that must govern the nations of the world, and be superior to all others.

PHYSICAL DIAGNOSIS, With Case Examples of the Inductive Method. By Howard S. Anders, A. M., M. D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia; Physician to the Philadelphia General Hospital, Tuberculosis Department; Late President to the Pennsylvania Society for the Prevention of Tuberculosis; Member American Medical Association, American Climatological Association, American Association for the Advancement of Science, etc. With eighty-eight illustrations in the text, and thirty-two plates. New York and London: D. Appleton & Co.

It is pleasing to note the fact that the author takes exceptions to the methods generally employed of scrutinizing the chemical and microscopical aspects of a patient's secretions and excretions in deference to the physical signs and objective symptoms. This is a move in the right

direction, and will give this work the prestige that should be accorded to one who dares to give his personal opinion, although it may seem to jar a little on obscure methods. We want diagnosis of troubles from the standpoint of efficient data and efficient correlation; then we can be of service to our patients. This work more fully covers the point of physical diagnosis in a practical way than those who have hobbies to ride, and can only see through such glasses. We commend this work to our friends, as we believe it will take a place as the standard authority upon the subject.

CLINICAL PSYCHIATRY. A Text-Book for Students and Physicians. Abstracted and Adapted from the Seventh German Edition of Kraepelin's "Lehrbuch der Psychiatrie." By A. Ross Diefendorf, M. D., Lecturer on Psychiatry in Yale University, Member of the American Neurological Association, of the New York Neurological Association, of the New York Psychiatrical Society, and of the American Medico-Psycological Association, etc. New edition, revised and augmented. New York: The Macmillan Company. Price, $3.75.

The sole object of this work is to educate the American physician along the line of thought according to Kraepelin's views, a full translation of which would have been too large, and would not serve the function for which it was intended, to interest the American reader; therefore, the writer has taken the liberty of abbreviating such matters that would not be interesting to his American brethren, although every thought that would lead to its value on the subject, and elucidate it for intelligent reading, has been retained. It is a work worthy the deepest thought. The student in psychiatry will appreciate this work, and find much food for thought.

POST-OPERATIVE TREATMENT. An Epitome of the General Management of Post-Operative Care and Treatment of Surgical Cases, as Practiced by Prominent American and European Surgeons. Together with Suggestions Concerning the Technic of Certain Operations with a View to Securing Better Post-Operative Results. By Nathan Clark Morse, A. B., M. D., Surgeon-in-Chief to "Emergency Hospital," Eldora, Iowa; District Surgeon, Chicago & Northwestern and Iowa Central Railways; ex-President Iowa State Association of Railroad Surgeons; Member American Medical Association, Pan-American Medical Congress, International Association of Railroad Surgeons, etc. Second edition. Revised and enlarged. Containing five plates and one hundred and seventy-five other illustrations. Philadelphia: P. Blakiston's Son & Co. Price, $4.00.

The family physician calls on the surgeon to perform an operation, and the operation is successfully done—the surgeon is relieved. Here comes in the post-operative treatment, and the case is either one in which the operation was successful, but the patient died, or the post-operative treatment was done successfully and the patient was cured or relieved. It would seem a crime to allow a patient to collapse after a successful operation, unless the patient was in a bad condition, and the operation was a last resort. The operation being done, with a chance in the patient's favor, the author believes that the post-operative treatment should have the most careful attention, as under the most favorable care untoward conditions occur at times. This is the only work of this kind that we have been called on to review, and believe it to be exclusive. Add this work to your library, and you will often refer to it.

THE HOME LIFE IN ORDER, OR PERSONAL AND DOMESTIC HYGIENE. By Alfred T. Schofield, M. D., late Lecturer and Examiner, National Health Society and Member Sanitary Institute; Vice-President and Examiner British College Physical Education; Hon. Physician Friedenheim Hospital, etc. New York: Funk & Wagnalls Company. Price, $1.50.

This book has many good traits, and should be placed in the homes by the family physician, because it will often be a great aid, especially when accidents happen and prompt action, of the right kind, will often delay serious results until the physician can arrive and give the proper attention. It gives pointers on hygiene of the household, and tells all that should be known and done in the absence of the physician. Dr. Schofield is well versed along this line of thought, and tells his ideas in a pleasing way, devoid of much technical matter that could only confuse the lay reader. Copies of this book should be placed in the homes of a doctor's best patrons.

MORRIS'S HUMAN ANATOMY. A Complete Systematic Treatise, by English and American Authors. Edited by Henry Morris, M. A. and M. B., London; F. R. C. S., England; President of the Royal College of Surgeons of England; Consulting Surgeon to Middlesex Hospital, London; Honorary Member of the Medical Society of the County of New York; formerly Chairman of the Court of Examiners of the Royal College of Surgeons; Examiner in Anatomy in the University of Durham, and Examiner in Surgery in the University of London; and J. Playfair McMurrich, A. M., Ph. D., Professor of Anatomy, University of Michigan; Member Association of American Anatomists; Member of Advisory Board, Wistar Institute of Anatomy, etc. Ten hundred and twenty-five illustrations, three hundred and nineteen printed in colors. Fourth edition, revised and enlarged. *In Five Parts.* Part I.—General Morphogeny, Osteology, Articulations. Price, $1.50. Part II.—The Musculature, the Organs of Circulation, the Lymphatics. Price, $2.00. Philadelphia: P. Blakiston's Son & Co.

This work has the advantage of other works on anatomy, owing to the fact that it can be had in one volume or five separate ones, giving the subjects a division that should find appreciation by a busy physician. The volumes have the subjects carefully noted on back of cover, and, therefore, easily and quickly scanned for the information wanted. We would suggest that general practitioners get this anatomy in parts, and thus have ready reference. To comment on Morris's Anatomy would be useless, as it has stood the test to its fourth enlarged and thoroughly revised edition. Get it now, while it is new.

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